Grade 3:
Resources for Developing Grade-Level Fluencies

RELEVANT STANDARDS:

3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

HOW TO USE THESE RESOURCES:

This document provides a set of short activities extracted from Engage NY, an Open Education Resource, to supplement the fluency practice in *GO Math!*. Although many *GO Math!* lessons include "Fluency Builders," they don't always align to grade-level expectations. Teachers are encouraged to use the activities that do align to the above standards and supplement with the resources in this document.

The activities are designed to support students' progress toward the grade-level fluency articulated in 3.OA.C.7 and 3.NBT.A.2. Some of the sprints and fluency activities review prerequisite skills that will help students reach the proficiencies required by the end of the grade. They are intentionally short, providing educators the flexibility to use them before or after a lesson or anytime during the school day. The activities are divided up according to the standard they are addressing. Many of the activities can be repeated, as needed, throughout the year, using different numbers. Addition/subtraction fluency can be used after the completion of Chapter 1 and multiplication/division resources have been aligned to suggested units and benchmarks to ensure that students meet the end of the year standard for knowing all facts from memory.

GRADE-SPECIFIC NOTES:

3.NBT.A.2 is introduced in Chapter 1 of the *GO Math!* materials. Practice on this standard should be distributed throughout the year to ensure that fluency is attained and maintained. A few fluency activities are provided to reinforce place value concepts and mental computation. These can be repeated with different problems as needed. Worksheets with computation practice are provided and should be distributed throughout the year.

3.OA.C.7 starts to be developed in Chapter 3. It is recommended that teachers begin using fluency activities related to this standard during Chapter 3. There are two resources available from Engage NY: (1) Fluency Activities help students systematically develop fluency with groups of facts and develop strategies for facts they have not yet memorized, and (2) Sprints provide practice with demonstrating fluency with facts. Although students will learn their facts at different times, it is important that facts are sequenced so students can use facts they know to develop fluency with other facts. Additionally, it will be helpful to track students' fact mastery to help all students reach the end of year goal. For more information on keeping track of students' fact recall, see Jason Zimba's blog post, How We've Been Using Flashcards.

ACTIVITIES TO USE TO DEVELOP FLUENCY WITH MULTI-DIGIT ADDITION AND SUBTRACTION

Selected Fluency Activities:

1. **SUBTRACT MENTALLY** (4 minutes)
   Note: This activity anticipates the role of place value in the subtraction algorithm.
   Directions:
   T: (Write 10 − 3 = ___.) Say the number sentence in units of one.
   S: 10 ones − 3 ones = 7 ones.
   Continue with the following sequence: 11 − 3 and 61 − 3 (as pictured below).

10 − 3 = 7	11 − 3 = 8	61 − 3 = 58
100 − 30 = 70	110 − 30 = 80	610 − 30 = 580

   T: (Write 100 − 30 = ___.) Now say the number sentences in units of ten.
   T: 10 tens − 3 tens = 7 tens.
   Continue with the following sequence: 110 − 30 and 610 − 30.
   Repeat with the following possible sequences:
   10 − 5, 12 − 5, and 73 − 5
   100 − 50, 120 − 50, and 730 − 50
   EngageNY, Module 2, Lesson 18

   This activity can be repeated using the same routine with the following sequence of problems:
   - 10 ones − 5 ones
   - 12 ones − 5 ones
   - 42 ones − 5 ones
   - 10 tens − 5 tens
   - 12 tens − 5 tens
   - 42 tens − 5 tens

2. **ESTIMATE AND ADD** (4 minutes)
   Materials: (S) Personal white board
   Directions:
   T: (Write 38 + 23 ≈ ___.) Say the addition problem.
   S: 38 + 23.
   T: Give me the new addition problem if we round each number to the nearest ten.
   S: 40 + 20.
   T: (Write 38 + 23 ≈ 40 + 20.) What's 40 + 20?
   S: 60.
   T: So, 38 + 23 should be close to ...?
   S: 60.
   T: On your personal white board, solve 38 + 23.
   S: (Solve.)
   Continue with the following possible sequence: 24 + 59, 173 + 49, and 519 + 185.
   EngageNY, Module 2, Lesson 18

3. **USE SUBTRACTION ALGORITHM WITH MEASUREMENTS** (4 minutes)
   Materials: (S) Personal white board
   Note: This activity reviews the role of place value in the subtraction algorithm from Lesson 18.
   T: (Write 80 L − 26 L = ___.) On your personal white board, solve using the standard algorithm.
   Continue with the following possible sequence: 380 L − 26 L, 380 L − 126 L, 908 g − 25 g, and 908 g − 425 g.
   EngageNY, Module 2, Lesson 19
   This activity can be repeated using the same routine with the following sequence of problems:
   - 50 L − 28 L
   - 450 L − 28 L

- 450 L – 228 L
- 604 g – 32 g
- 604 g – 132 g

4. **ESTIMATE AND SUBTRACT** (4 minutes)
   Materials: (S) Personal white board
   Directions:
   T: (Write 71 – 23 ≈ ___.) Say the subtraction sentence.
   S: 71 – 23.
   T: Say the subtraction sentence, rounding each number to the nearest ten.
   S: 70 – 20.
   T: (Write 71 – 23 ≈ 70 – 20.) What's 70 – 20?
   S: 50.
   T: So, 71 – 23 should be close to...?
   S: 50.
   T: On your boards, answer 71 – 23.
   S: (Solve.)
   Continue with the following suggested sequence: 47 – 18, 574 – 182, and 704 – 187.
   [EngageNY, Module 2, Lesson 21](#)

Computation Practice:
- [Add a three-digit and two-digit number so that the total is within 1000](#)
- [Add two three-digit numbers so that the total is within 1000](#)
- [Subtract 2-digit from 3-digit number](#)
- [Subtract 2-Digit from 3-Digit Number With Regrouping](#)
- [Subtract 3-digit from 3-digit number](#)
- [Complete the 3-Digit Addition Equation](#)
- [Complete the 3-Digit Subtraction Equation](#)
- [Balance the 3-Digit Addition or Subtraction Equation](#)

ACTIVITIES TO USE TO DEVELOP FLUENCY WITH MULTIPLICATION FACTS:

Selected Fluency Activities:
The first set of Fluency activities shows a progression of activities to develop students' fluency with 2s facts. The second set shows a progression to develop 6s facts, that occurs later in the year. A similar progression of activities can be done focusing on any factor 2-10. Any hand-outs that are referenced can be found in the linked EngageNY lessons. All 3rd grade Pattern Sheets can be found in Appendix A.

SET 1: DEVELOPING 2S FACTS

1. **GROUP COUNTING** (5 minutes)
   Note: Basic skip-counting skills from Grade 2 shift focus in this Grade 3 activity. Group counting lays a foundation for interpreting multiplication as repeated addition. When students count groups in this activity, they add and subtract groups of 2 when counting up and down.
   Directions:
   T: Let's count to 20 forward and backward. Watch my fingers to know whether to count up or down. A closed hand means stop. (Show signals during the explanation.)
   T: (Rhythmically point up until a change is desired. Show a closed hand; then point down.)
   S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0.
   T: Let's count to 20 forward and backward again. This time whisper every other number. Say the other numbers in a regular voice.
   S: (Whisper) 1, (speak) 2, (whisper) 3, (speak) 4, (whisper) 5, (speak) 6, etc.

T: Let's count to 20 forward and backward again. This time, hum every other number instead of whispering. As you hum, think of the number.
S: (Hum), 2, (hum), 4, (hum), 6, etc.
T: Let's count to 20 forward and backward again. This time, think every other number instead of humming.
S: (Think), 2, (think), 4, (think), 6, etc.
T: What did we just count by? Turn and talk to your partner.
S: Twos.
T: Let's count by twos. (Direct students to count forward to and backward from 20, changing directions at times.)
Engage NY, Module 1, Lesson 1

2. **GROUP COUNTING** (3 minutes)

Note: Basic skip-counting skills from Grade 2 shift focus in this Grade 3 activity. Group counting reviews interpreting multiplication as repeated addition. Counting by twos and threes in this activity anticipates work with those factors in Topic B.
Directions:
T: Let's count by twos. (Direct students to count forward and backward to 20, periodically changing directions.)
T: Let's count by threes. (Direct students to count forward and backward to 21, periodically changing directions. Emphasize the 9 to 12 and 18 to 21 transitions.)
EngageNY, Module 1, Lesson 2

3. **MULTIPLY WITH TWOS** (5 minutes)
Materials: (S) Personal white board, twos array (Fluency Template), blank paper
Note: Students unit count objects in an array and write multiplication sentences that match the count-by.
Directions:
T: Slip your template into your personal white board.
T: Turn your board so that it's vertical. Use your blank paper to cover all but the first row of dots.
T: How many twos show?
S: 1 two.
T: Say the multiplication sentence to represent the array that's shown and solve.
S: $1 \times 2 = 2$.
T: Uncover another row.
Continue this sequence having students uncover twos for 2×2, 3×2, 10×2, 4×2, 5×2, 6×2, 7×2, 9×2, and 8×2.
EngageNY, Module 1, Lesson 7

4. **MULTIPLY BY 2 PATTERN SHEET** (8 minutes)
Materials: (S) Multiply by 2 (1−5) (Pattern Sheet)
Note: This activity builds fluency with multiplication facts using units of 2. It works toward students knowing from memory all products of two one-digit numbers.
Directions:
T: (Write $5 \times 2 = $ _____.) Let's skip-count by twos to find the answer. (Count with fingers to 5 as students count. Record skip-count on the board.)
S: 2, 4, 6, 8, 10.
T: (Circle 10 and write $5 \times 2 = 10$ above it. Write $3 \times 2 = $ _____.) Let's skip-count up by twos again. (Count with fingers to 3 as students count.)
S: 2, 4, 6.
T: Let's see how we can skip-count down to find the answer, too. Start at 10 with 5 fingers, 1 for each two. (Count down with your fingers as students say numbers.)
S: 10 (5 fingers), 8 (4 fingers), 6 (3 fingers).
Repeat the process for 4×2.
T: Let's practice multiplying by 2.

- ● Distribute Multiply-By Pattern Sheet.
- ● Allow a maximum of 2 minutes for students to complete as many problems as possible.
- ● Direct students to work left to right across the page.
- ● Encourage skip-counting strategies to solve unknown facts.

Engage NY, Module 1, Lesson 9

5. MULTIPLY BY 2 PATTERN SHEET (8 minutes)

Materials: (S) Multiply by 2 (6–10) (Pattern Sheet)

Note: This activity builds fluency with multiplication facts using units of 2. It works toward students knowing from memory all products of two one-digit numbers. See Lesson 9 for the directions for administering a Multiply-By Pattern Sheet.

Directions:

T: (Write $7 \times 2 =$ ____.) Let's skip-count up by twos. (Count with fingers to 7 as students count.)

S: 2, 4, 6, 8, 10, 12, 14.

T: This time, let's start from 10 to find our answer more quickly. Show 5 fingers all at once to show 10.

S: (Show 5 fingers.)

T: Now, count by twos from 10. Raise another finger for each two you count. (Model as students count.)

S: 10, 12, 14. (Raise a sixth finger at 12, and a seventh finger at 14.)

T: Let's see how we can skip-count down to find the answer, too. Start at 20. (Show 10 fingers to represent 20. Hide one finger at a time as students say numbers.)

S: 20, 18, 16, 14.

Repeat the process for 9×2 and 8×2.

T: (Distribute Multiply by 2 Pattern Sheet.) Let's get some practice multiplying by 2. Be sure to work left to right across the page.

Engage NY, Module 1, Lesson 10

6. SPRINT: MULTIPLY OR DIVIDE BY 2 (9 minutes)

Materials: (S) Multiply or Divide by 2 Sprint

Note: This activity builds fluency with multiplication and division using units of 2. It works toward students' ability to multiply and divide fluently within 100. See Lesson 2 for the directions for administering a Sprint.

Engage NY, Module 1, Lesson 13

SET 2: DEVELOPING 6S FACTS

1. GROUP COUNTING (6 minutes)

Materials: (S) Personal white board

Note: This group counting activity reviews units of 6 and the relationship between multiplication and division.

Directions:

T: Count by sixes to 60. (Write on the board as students count.)

S: 6, 12, 18, 24, 30, 36, 42, 48, 54, 60.

6	12	18	24	30	36	42	48	54	60
1 six	2 sixes	3 sixes	4 sixes	5 sixes	6 sixes	7 sixes	8 sixes	9 sixes	10 sixes
$6 \div 6$	$12 \div 6$	$18 \div 6$	$24 \div 6$	$30 \div 6$	$36 \div 6$	$42 \div 6$	$48 \div 6$	$54 \div 6$	$60 \div 6$

T: (Beneath 6, write 1 six. Point to the 12.) 12 is the same as how many sixes?

S: 2 sixes.

T: (Write 2 sixes beneath 12. Point to the 18.) 18 is the same as how many sixes?

S: 3 sixes.

T: (Write 3 sixes beneath 18. Point to 1 six.) Let's count units of 6. (Write as students count.)

S: 1 six, 2 sixes, 3 sixes, 4 sixes, 5 sixes, 6 sixes, 7 sixes, 8 sixes, 9 sixes, 10 sixes.

T: (Point to 60.) How many sixes are in 60?

S: 10 sixes.

T: (Beneath 10 sixes, write $60 \div 6 =$.) What's $60 \div 6$?

S: 10.

T: (Write $60 \div 6 = 10$. Beneath 1 six, write $6 \div 6 =$.) On your personal white board, write the number sentence.

S: ($6 \div 6 = 1$.)

Repeat the process for the rest of the chart.

Engage NY, Module 6, Lesson 5

2. MULTIPLY BY 6 (7 minutes)

Materials: (S) Multiply by 6 (1–5) (Pattern Sheet)

Note: This activity builds fluency with multiplication facts using units of 6. It works toward students knowing from memory all products of two one-digit numbers.

Directions:

T: (Write $5 \times 6 =$ ____.) Let's skip-count up by sixes to find the answer. (Raise a finger for each number to track the count. Record the skip-count answers on the board.)

S: 6, 12, 18, 24, 30.

T: (Circle 30, and write $5 \times 6 = 30$ above it. Write $3 \times 6 =$ ____.) Let's skip-count up by sixes again. (Track with fingers as students count.)

S: 6, 12, 18.

T: Let's see how we can skip-count down to find the answer, too. Start at 30 with 5 fingers, 1 for each six. (Count down with your fingers as students say numbers.)

S: 30 (5 fingers), 24 (4 fingers), 18 (3 fingers).

Repeat the process for 4×6.

T: (Distribute Multiply by 6 Pattern Sheet.) Let's practice multiplying by 6. Be sure to work left to right across the page.

Directions for Administration of Multiply-By Pattern Sheet

- ● Distribute Multiply-By Pattern Sheet. (see p 8. Of Sprints packet)
- ● Allow a maximum of two minutes for students to complete as many problems as possible.
- ● Direct students to work left to right across the page.
- ● Encourage skip-counting strategies to solve unknown facts.

EngageNY, Module 6, Lesson 6

3. MULTIPLY BY 6 (8 minutes)

Materials: (S) Multiply by 6 (6–10) (Pattern Sheet)

Note: This activity builds fluency with multiplication facts using units of 6. It works toward students knowing from memory all products of two one-digit numbers. See Lesson 6 for the directions for administration of a Multiply-By Pattern Sheet.

Directions:

T: (Write $7 \times 6 =$.) Let's skip-count up by sixes. I'll raise a finger for each six. (Raise a finger for each number to track the count. Record the skip-count answers on the board.)

S: 6, 12, 18, 24, 30, 36, 42.

T: Let's see how we can skip-count down to find the answer, too. Start at 60 with 10 fingers, 1 for each six. (Count down with fingers as students say numbers.)

S: 60 (10 fingers), 54 (9 fingers), 48 (8 fingers), 42 (7 fingers).

Continue with the following suggested sequence: 9×6, 6×6, and 8×6.

T: (Distribute Multiply by 6 Pattern Sheet.) Let's practice multiplying by 6. Be sure to work left to right across the page.

EngageNY, Module 6, Lesson 7

4. **GROUP COUNTING** (3 minutes)

   Materials: (S) Personal white board

   Note: This group counting activity reviews the relationship between counting by a unit and multiplying and dividing with that unit.

   T: Count by sixes to 60.

   S: 6, 12, 18, 24, 30, 36, 42, 48, 54, 60.

   T: (Write 4 sixes = .) Write the number sentence.

   S: (Write 4 sixes = 24.)

   T: Write 4 sixes as a multiplication sentence.

   S: (Write 4 × 6 = 24.)

   T: (Write 48 ÷ 6 = .) Write the number sentence. Count by sixes if you're unsure.

   S: (Write 48 ÷ 6 = 8.)

   T: Count by eights to 80.

   S: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80.

   T: (Write 3 eights = .) Write the number sentence.

   S: (Write 3 eights = 24.)

   T: Write 3 eights as a multiplication sentence.

   S: (Write 3 × 8 = 24.)

   T: (Write 56 ÷ 8 = .) Write the number sentence. Count by eights if you're unsure.

   S: (Write 56 ÷ 8 = 7.)

   T: Count by nines to 90.

   S: 9, 18, 27, 36, 45, 54, 63, 72, 81, 90.

   T: (Write 4 nines = .) Write the number sentence.

   S: (Write 4 nines = 36.)

   T: Write 4 nines as a multiplication sentence.

   S: (Write 4 × 9 = 36.)

   T: (Write 54 ÷ 9 = .) Write the number sentence. Count by nines if you're unsure.

   S: (Write 54 ÷ 9 = 6.)

   EngageNY. Module 6, Lesson 9

Sprints:

- ● All 3rd grade sprints for 3.OA.C.7 can be found in Appendix B.

Directions for Administration of Sprints

A Sprint has two parts, A and B, with closely related problems on each. Each part is organized into four quadrants that move from simple to complex. This builds a challenge into each Sprint for every learner. Before the lesson, print Sprint A and Sprint B on two separate sheets of paper. Students complete the two parts of the Sprint in quick succession with the goal of improving for the second part, even if only by one more. With practice, the following routine takes about 9 minutes.

SPRINT A

Place Sprint A face down on student desks, and instruct students not to look at the problems until a signal is given.

T: You will have 60 seconds to do as many problems as you can. I do not expect you to finish all of them, just as many as you can, trying for your personal best.

T: Take your mark! Get set! THINK!

Students turn papers over and work furiously to finish as many problems as they can in 60 seconds. Time precisely.

T: Stop! Circle the last problem you completed. I will read just the answers. If you got the answer right, call out "Yes!" If you made a mistake, circle it. Ready?

Repeat to the end of Sprint A or until no student has a correct answer.

T: Now, at the top of the page, write the number of problems you got correct. This is your personal goal for Sprint B.

T: How many of you got one right? (All hands should go up.)

T: Keep your hand up until I say a number that is one more than the number you got right. So, if you got 14 right, when I say 15, your hand goes down. Ready?

T: (Continue quickly.) How many got two right? Three? Four? Five? (Continue until all hands are down.)

If the class needs more practice with Sprint A, continue with the optional routine presented below.

T: Take one minute to do more problems on this half of the Sprint.

As students work, the student who scored highest on Sprint A might pass out Sprint B.

T: Stop! I will read just the answers. If you got it right, call out "Yes!" If you made a mistake, circle it. Ready?

Read the answers to the first half again as students stand.

Movement: To keep the energy and fun going, do a stretch or a movement game in between Sprints.

SPRINT B

Place Sprint B face down on student desks, and instruct students not to look at the problems until a signal is given. Repeat the procedure for Sprint A up through the show of hands for how many correct answers.

T: Stand up if you got more correct on the second Sprint than on the first.

S: (Stand.)

T: Keep standing until I say the number that tells how many more you got right on Sprint B. If you got three more right on Sprint B than on Sprint A, when I say three, you sit down. Ready?

Call out numbers, starting with one. Students sit as the number by which they improved is called. Students may take Sprints home.

Appendix A

Multiply.

2 x 1 = _____	2 x 2 = _____	2 x 3 = _____	2 x 4 = _____
2 x 5 = _____	2 x 1 = _____	2 x 2 = _____	2 x 1 = _____
2 x 3 = _____	2 x 1 = _____	2 x 4 = _____	2 x 1 = _____
2 x 5 = _____	2 x 1 = _____	2 x 2 = _____	2 x 3 = _____
2 x 2 = _____	2 x 4 = _____	2 x 2 = _____	2 x 5 = _____
2 x 2 = _____	2 x 1 = _____	2 x 2 = _____	2 x 3 = _____
2 x 1 = _____	2 x 3 = _____	2 x 2 = _____	2 x 3 = _____
2 x 4 = _____	2 x 3 = _____	2 x 5 = _____	2 x 3 = _____
2 x 4 = _____	2 x 1 = _____	2 x 4 = _____	2 x 2 = _____
2 x 4 = _____	2 x 3 = _____	2 x 4 = _____	2 x 5 = _____
2 x 4 = _____	2 x 5 = _____	2 x 1 = _____	2 x 5 = _____
2 x 2 = _____	2 x 5 = _____	2 x 3 = _____	2 x 5 = _____
2 x 4 = _____	2 x 2 = _____	2 x 4 = _____	2 x 3 = _____
2 x 5 = _____	2 x 3 = _____	2 x 2 = _____	2 x 4 = _____
2 x 3 = _____	2 x 5 = _____	2 x 2 = _____	2 x 4 = _____

Multiply.

2 x 1 = _____	2 x 2 = _____	2 x 3 = _____	2 x 4 = _____
2 x 5 = _____	2 x 6 = _____	2 x 7 = _____	2 x 8 = _____
2 x 9 = _____	2 x 10 = _____	2 x 5 = _____	2 x 6 = _____
2 x 5 = _____	2 x 7 = _____	2 x 5 = _____	2 x 8 = _____
2 x 5 = _____	2 x 9 = _____	2 x 5 = _____	2 x 10 = _____
2 x 6 = _____	2 x 5 = _____	2 x 6 = _____	2 x 7 = _____
2 x 6 = _____	2 x 8 = _____	2 x 6 = _____	2 x 9 = _____
2 x 6 = _____	2 x 7 = _____	2 x 6 = _____	2 x 7 = _____
2 x 8 = _____	2 x 7 = _____	2 x 9 = _____	2 x 7 = _____
2 x 8 = _____	2 x 6 = _____	2 x 8 = _____	2 x 7 = _____
2 x 8 = _____	2 x 9 = _____	2 x 9 = _____	2 x 6 = _____
2 x 9 = _____	2 x 7 = _____	2 x 9 = _____	2 x 8 = _____
2 x 9 = _____	2 x 8 = _____	2 x 6 = _____	2 x 9 = _____
2 x 7 = _____	2 x 9 = _____	2 x 6 = _____	2 x 8 = _____
2 x 9 = _____	2 x 7 = _____	2 x 6 = _____	2 x 8 = _____

8

Multiply.

3 x 1 = _____	3 x 2 = _____	3 x 3 = _____	3 x 4 = _____
3 x 5 = _____	3 x 1 = _____	3 x 2 = _____	3 x 1 = _____
3 x 3 = _____	3 x 1 = _____	3 x 4 = _____	3 x 1 = _____
3 x 5 = _____	3 x 1 = _____	3 x 2 = _____	3 x 3 = _____
3 x 2 = _____	3 x 4 = _____	3 x 2 = _____	3 x 5 = _____
3 x 2 = _____	3 x 1 = _____	3 x 2 = _____	3 x 3 = _____
3 x 1 = _____	3 x 3 = _____	3 x 2 = _____	3 x 3 = _____
3 x 4 = _____	3 x 3 = _____	3 x 5 = _____	3 x 3 = _____
3 x 4 = _____	3 x 1 = _____	3 x 4 = _____	3 x 2 = _____
3 x 4 = _____	3 x 3 = _____	3 x 4 = _____	3 x 5 = _____
3 x 4 = _____	3 x 5 = _____	3 x 1 = _____	3 x 5 = _____
3 x 2 = _____	3 x 5 = _____	3 x 3 = _____	3 x 5 = _____
3 x 4 = _____	3 x 2 = _____	3 x 4 = _____	3 x 3 = _____
3 x 5 = _____	3 x 3 = _____	3 x 2 = _____	3 x 4 = _____
3 x 3 = _____	3 x 5 = _____	3 x 2 = _____	3 x 4 = _____

Multiply.

3 x 1 = _____	3 x 2 = _____	3 x 3 = _____	3 x 4 = _____
3 x 5 = _____	3 x 6 = _____	3 x 7 = _____	3 x 8 = _____
3 x 9 = _____	3 x 10 = _____	3 x 5 = _____	3 x 6 = _____
3 x 5 = _____	3 x 7 = _____	3 x 5 = _____	3 x 8 = _____
3 x 5 = _____	3 x 9 = _____	3 x 5 = _____	3 x 10 = _____
3 x 6 = _____	3 x 5 = _____	3 x 6 = _____	3 x 7 = _____
3 x 6 = _____	3 x 8 = _____	3 x 6 = _____	3 x 9 = _____
3 x 6 = _____	3 x 7 = _____	3 x 6 = _____	3 x 7 = _____
3 x 8 = _____	3 x 7 = _____	3 x 9 = _____	3 x 7 = _____
3 x 8 = _____	3 x 6 = _____	3 x 8 = _____	3 x 7 = _____
3 x 8 = _____	3 x 9 = _____	3 x 9 = _____	3 x 6 = _____
3 x 9 = _____	3 x 7 = _____	3 x 9 = _____	3 x 8 = _____
3 x 9 = _____	3 x 8 = _____	3 x 6 = _____	3 x 9 = _____
3 x 7 = _____	3 x 9 = _____	3 x 6 = _____	3 x 8 = _____
3 x 9 = _____	3 x 7 = _____	3 x 6 = _____	3 x 8 = _____

COMMON CORE | **Lesson 12:** Interpret the quotient as the number of groups or the number of objects in each group using units of 2.
Date: 5/6/13

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Multiply.

4 x 1 = _____	4 x 2 = _____	4 x 3 = _____	4 x 4 = _____
4 x 5 = _____	4 x 1 = _____	4 x 2 = _____	4 x 1 = _____
4 x 3 = _____	4 x 1 = _____	4 x 4 = _____	4 x 1 = _____
4 x 5 = _____	4 x 1 = _____	4 x 2 = _____	4 x 3 = _____
4 x 2 = _____	4 x 4 = _____	4 x 2 = _____	4 x 5 = _____
4 x 2 = _____	4 x 1 = _____	4 x 2 = _____	4 x 3 = _____
4 x 1 = _____	4 x 3 = _____	4 x 2 = _____	4 x 3 = _____
4 x 4 = _____	4 x 3 = _____	4 x 5 = _____	4 x 3 = _____
4 x 4 = _____	4 x 1 = _____	4 x 4 = _____	4 x 2 = _____
4 x 4 = _____	4 x 3 = _____	4 x 4 = _____	4 x 5 = _____
4 x 4 = _____	4 x 5 = _____	4 x 1 = _____	4 x 5 = _____
4 x 2 = _____	4 x 5 = _____	4 x 3 = _____	4 x 5 = _____
4 x 4 = _____	4 x 2 = _____	4 x 4 = _____	4 x 3 = _____
4 x 5 = _____	4 x 3 = _____	4 x 2 = _____	4 x 4 = _____
4 x 3 = _____	4 x 5 = _____	4 x 2 = _____	4 x 4 = _____

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Multiply.

4 x 1 = _____	4 x 2 = _____	4 x 3 = _____	4 x 4 = _____
4 x 5 = _____	4 x 6 = _____	4 x 7 = _____	4 x 8 = _____
4 x 9 = _____	4 x 10 = _____	4 x 5 = _____	4 x 6 = _____
4 x 5 = _____	4 x 7 = _____	4 x 5 = _____	4 x 8 = _____
4 x 5 = _____	4 x 9 = _____	4 x 5 = _____	4 x 10 = _____
4 x 6 = _____	4 x 5 = _____	4 x 6 = _____	4 x 7 = _____
4 x 6 = _____	4 x 8 = _____	4 x 6 = _____	4 x 9 = _____
4 x 6 = _____	4 x 7 = _____	4 x 6 = _____	4 x 7 = _____
4 x 8 = _____	4 x 7 = _____	4 x 9 = _____	4 x 7 = _____
4 x 8 = _____	4 x 6 = _____	4 x 8 = _____	4 x 7 = _____
4 x 8 = _____	4 x 9 = _____	4 x 9 = _____	4 x 6 = _____
4 x 9 = _____	4 x 7 = _____	4 x 9 = _____	4 x 8 = _____
4 x 9 = _____	4 x 8 = _____	4 x 6 = _____	4 x 9 = _____
4 x 7 = _____	4 x 9 = _____	4 x 6 = _____	4 x 8 = _____
4 x 9 = _____	4 x 7 = _____	4 x 6 = _____	4 x 8 = _____

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Lesson 16: Use the distributive property as a strategy find related multiplication facts.

Date: 5/6/13

engage^ny

1.E.30

Multiply.

6 x 1 = _____	6 x 2 = _____	6 x 3 = _____	6 x 4 = _____
6 x 5 = _____	6 x 1 = _____	6 x 2 = _____	6 x 1 = _____
6 x 3 = _____	6 x 1 = _____	6 x 4 = _____	6 x 1 = _____
6 x 5 = _____	6 x 1 = _____	6 x 2 = _____	6 x 3 = _____
6 x 2 = _____	6 x 4 = _____	6 x 2 = _____	6 x 5 = _____
6 x 2 = _____	6 x 1 = _____	6 x 2 = _____	6 x 3 = _____
6 x 1 = _____	6 x 3 = _____	6 x 2 = _____	6 x 3 = _____
6 x 4 = _____	6 x 3 = _____	6 x 5 = _____	6 x 3 = _____
6 x 4 = _____	6 x 1 = _____	6 x 4 = _____	6 x 2 = _____
6 x 4 = _____	6 x 3 = _____	6 x 4 = _____	6 x 5 = _____
6 x 4 = _____	6 x 5 = _____	6 x 1 = _____	6 x 5 = _____
6 x 2 = _____	6 x 5 = _____	6 x 3 = _____	6 x 5 = _____
6 x 4 = _____	6 x 2 = _____	6 x 4 = _____	6 x 3 = _____
6 x 5 = _____	6 x 3 = _____	6 x 2 = _____	6 x 4 = _____
6 x 3 = _____	6 x 5 = _____	6 x 2 = _____	6 x 4 = _____

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COMMON CORE | **Lesson 5:** Count by units of 7 to multiply and divide using number bonds to decompose.
Date: 7/31/13

engage^ny   **3.B.19**

5

3.B.31

Multiply.

6 x 1 = _____	6 x 2 = _____	6 x 3 = _____	6 x 4 = _____
6 x 5 = _____	6 x 6 = _____	6 x 7 = _____	6 x 8 = _____
6 x 9 = _____	6 x 10 = _____	6 x 5 = _____	6 x 6 = _____
6 x 5 = _____	6 x 7 = _____	6 x 5 = _____	6 x 8 = _____
6 x 5 = _____	6 x 9 = _____	6 x 5 = _____	6 x 10 = _____
6 x 6 = _____	6 x 5 = _____	6 x 6 = _____	6 x 7 = _____
6 x 6 = _____	6 x 8 = _____	6 x 6 = _____	6 x 9 = _____
6 x 6 = _____	6 x 7 = _____	6 x 6 = _____	6 x 7 = _____
6 x 8 = _____	6 x 7 = _____	6 x 9 = _____	6 x 7 = _____
6 x 8 = _____	6 x 6 = _____	6 x 8 = _____	6 x 7 = _____
6 x 8 = _____	6 x 9 = _____	6 x 9 = _____	6 x 6 = _____
6 x 9 = _____	6 x 7 = _____	6 x 9 = _____	6 x 8 = _____
6 x 9 = _____	6 x 8 = _____	6 x 6 = _____	6 x 9 = _____
6 x 7 = _____	6 x 9 = _____	6 x 6 = _____	6 x 8 = _____
6 x 9 = _____	6 x 7 = _____	6 x 6 = _____	6 x 8 = _____

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Multiply.

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 1 = _____
7 x 3 = _____	7 x 1 = _____	7 x 4 = _____	7 x 1 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 2 = _____	7 x 4 = _____	7 x 2 = _____	7 x 5 = _____
7 x 2 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 1 = _____	7 x 3 = _____	7 x 2 = _____	7 x 3 = _____
7 x 4 = _____	7 x 3 = _____	7 x 5 = _____	7 x 3 = _____
7 x 4 = _____	7 x 1 = _____	7 x 4 = _____	7 x 2 = _____
7 x 4 = _____	7 x 3 = _____	7 x 4 = _____	7 x 5 = _____
7 x 4 = _____	7 x 5 = _____	7 x 1 = _____	7 x 5 = _____
7 x 2 = _____	7 x 5 = _____	7 x 3 = _____	7 x 5 = _____
7 x 4 = _____	7 x 2 = _____	7 x 4 = _____	7 x 3 = _____
7 x 5 = _____	7 x 3 = _____	7 x 2 = _____	7 x 4 = _____
7 x 3 = _____	7 x 5 = _____	7 x 2 = _____	7 x 4 = _____

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COMMON CORE

engage^{ny}

3.B.41

Multiply.

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 6 = _____	7 x 7 = _____	7 x 8 = _____
7 x 9 = _____	7 x 10 = _____	7 x 5 = _____	7 x 6 = _____
7 x 5 = _____	7 x 7 = _____	7 x 5 = _____	7 x 8 = _____
7 x 5 = _____	7 x 9 = _____	7 x 5 = _____	7 x 10 = _____
7 x 6 = _____	7 x 5 = _____	7 x 6 = _____	7 x 7 = _____
7 x 6 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 6 = _____	7 x 7 = _____	7 x 6 = _____	7 x 7 = _____
7 x 8 = _____	7 x 7 = _____	7 x 9 = _____	7 x 7 = _____
7 x 8 = _____	7 x 6 = _____	7 x 8 = _____	7 x 7 = _____
7 x 8 = _____	7 x 9 = _____	7 x 9 = _____	7 x 6 = _____
7 x 9 = _____	7 x 7 = _____	7 x 9 = _____	7 x 8 = _____
7 x 9 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 7 = _____	7 x 9 = _____	7 x 6 = _____	7 x 8 = _____
7 x 9 = _____	7 x 7 = _____	7 x 6 = _____	7 x 8 = _____

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Multiply.

8 x 1 = _____   8 x 2 = _____   8 x 3 = _____   8 x 4 = _____

8 x 5 = _____   8 x 1 = _____   8 x 2 = _____   8 x 1 = _____

8 x 3 = _____   8 x 1 = _____   8 x 4 = _____   8 x 1 = _____

8 x 5 = _____   8 x 1 = _____   8 x 2 = _____   8 x 3 = _____

8 x 2 = _____   8 x 4 = _____   8 x 2 = _____   8 x 5 = _____

8 x 2 = _____   8 x 1 = _____   8 x 2 = _____   8 x 3 = _____

8 x 1 = _____   8 x 3 = _____   8 x 2 = _____   8 x 3 = _____

8 x 4 = _____   8 x 3 = _____   8 x 5 = _____   8 x 3 = _____

8 x 4 = _____   8 x 1 = _____   8 x 4 = _____   8 x 2 = _____

8 x 4 = _____   8 x 3 = _____   8 x 4 = _____   8 x 5 = _____

8 x 4 = _____   8 x 5 = _____   8 x 1 = _____   8 x 5 = _____

8 x 2 = _____   8 x 5 = _____   8 x 3 = _____   8 x 5 = _____

8 x 4 = _____   8 x 2 = _____   8 x 4 = _____   8 x 3 = _____

8 x 5 = _____   8 x 3 = _____   8 x 2 = _____   8 x 4 = _____

8 x 3 = _____   8 x 5 = _____   8 x 2 = _____   8 x 4 = _____

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Multiply.

8 x 1 = _____   8 x 2 = _____   8 x 3 = _____   8 x 4 = _____

8 x 5 = _____   8 x 6 = _____   8 x 7 = _____   8 x 8 = _____

8 x 9 = _____   8 x 10 = _____   8 x 5 = _____   8 x 6 = _____

8 x 5 = _____   8 x 7 = _____   8 x 5 = _____   8 x 8 = _____

8 x 5 = _____   8 x 9 = _____   8 x 5 = _____   8 x 10 = _____

8 x 6 = _____   8 x 5 = _____   8 x 6 = _____   8 x 7 = _____

8 x 6 = _____   8 x 8 = _____   8 x 6 = _____   8 x 9 = _____

8 x 6 = _____   8 x 7 = _____   8 x 6 = _____   8 x 7 = _____

8 x 8 = _____   8 x 7 = _____   8 x 9 = _____   8 x 7 = _____

8 x 8 = _____   8 x 6 = _____   8 x 8 = _____   8 x 7 = _____

8 x 8 = _____   8 x 9 = _____   8 x 9 = _____   8 x 6 = _____

8 x 9 = _____   8 x 7 = _____   8 x 9 = _____   8 x 8 = _____

8 x 9 = _____   8 x 8 = _____   8 x 6 = _____   8 x 9 = _____

8 x 7 = _____   8 x 9 = _____   8 x 6 = _____   8 x 8 = _____

8 x 9 = _____   8 x 7 = _____   8 x 6 = _____   8 x 8 = _____

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Multiply.

9 x 1 = _____   9 x 2 = _____   9 x 3 = _____   9 x 4 = _____

9 x 5 = _____   9 x 1 = _____   9 x 2 = _____   9 x 1 = _____

9 x 3 = _____   9 x 1 = _____   9 x 4 = _____   9 x 1 = _____

9 x 5 = _____   9 x 1 = _____   9 x 2 = _____   9 x 3 = _____

9 x 2 = _____   9 x 4 = _____   9 x 2 = _____   9 x 5 = _____

9 x 2 = _____   9 x 1 = _____   9 x 2 = _____   9 x 3 = _____

9 x 1 = _____   9 x 3 = _____   9 x 2 = _____   9 x 3 = _____

9 x 4 = _____   9 x 3 = _____   9 x 5 = _____   9 x 3 = _____

9 x 4 = _____   9 x 1 = _____   9 x 4 = _____   9 x 2 = _____

9 x 4 = _____   9 x 3 = _____   9 x 4 = _____   9 x 5 = _____

9 x 4 = _____   9 x 5 = _____   9 x 1 = _____   9 x 5 = _____

9 x 2 = _____   9 x 5 = _____   9 x 3 = _____   9 x 5 = _____

9 x 4 = _____   9 x 2 = _____   9 x 4 = _____   9 x 3 = _____

9 x 5 = _____   9 x 3 = _____   9 x 2 = _____   9 x 4 = _____

9 x 3 = _____   9 x 5 = _____   9 x 2 = _____   9 x 4 = _____

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COMMON CORE

Lesson 14: Identify and use arithmetic patterns to multiply.
Date: 7/31/13

engageny

3.D.34

13

Multiply.

9 x 1 = _____   9 x 2 = _____   9 x 3 = _____   9 x 4 = _____

9 x 5 = _____   9 x 6 = _____   9 x 7 = _____   9 x 8 = _____

9 x 9 = _____   9 x 10 = _____   9 x 5 = _____   9 x 6 = _____

9 x 5 = _____   9 x 7 = _____   9 x 5 = _____   9 x 8 = _____

9 x 5 = _____   9 x 9 = _____   9 x 5 = _____   9 x 10 = _____

9 x 6 = _____   9 x 5 = _____   9 x 6 = _____   9 x 7 = _____

9 x 6 = _____   9 x 8 = _____   9 x 6 = _____   9 x 9 = _____

9 x 6 = _____   9 x 7 = _____   9 x 6 = _____   9 x 7 = _____

9 x 8 = _____   9 x 7 = _____   9 x 9 = _____   9 x 7 = _____

9 x 8 = _____   9 x 6 = _____   9 x 8 = _____   9 x 7 = _____

9 x 8 = _____   9 x 9 = _____   9 x 9 = _____   9 x 6 = _____

9 x 9 = _____   9 x 7 = _____   9 x 9 = _____   9 x 8 = _____

9 x 9 = _____   9 x 8 = _____   9 x 6 = _____   9 x 9 = _____

9 x 7 = _____   9 x 9 = _____   9 x 6 = _____   9 x 8 = _____

9 x 9 = _____   9 x 7 = _____   9 x 6 = _____   9 x 8 = _____

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Lesson 15: Interpret the unknown in multiplication and division to model and solve problems.
Date: 7/31/13

engageny

3.D.41

14

Multiply.

4 x 1 = _____	4 x 2 = _____	4 x 3 = _____	4 x 4 = _____
4 x 5 = _____	4 x 6 = _____	4 x 7 = _____	4 x 8 = _____
4 x 9 = _____	4 x 10 = _____	4 x 5 = _____	4 x 6 = _____
4 x 5 = _____	4 x 7 = _____	4 x 5 = _____	4 x 8 = _____
4 x 5 = _____	4 x 9 = _____	4 x 5 = _____	4 x 10 = _____
4 x 6 = _____	4 x 5 = _____	4 x 6 = _____	4 x 7 = _____
4 x 6 = _____	4 x 8 = _____	4 x 6 = _____	4 x 9 = _____
4 x 6 = _____	4 x 7 = _____	4 x 6 = _____	4 x 7 = _____
4 x 8 = _____	4 x 7 = _____	4 x 9 = _____	4 x 7 = _____
4 x 8 = _____	4 x 6 = _____	4 x 8 = _____	4 x 7 = _____
4 x 8 = _____	4 x 9 = _____	4 x 9 = _____	4 x 6 = _____
4 x 9 = _____	4 x 7 = _____	4 x 9 = _____	4 x 8 = _____
4 x 9 = _____	4 x 8 = _____	4 x 6 = _____	4 x 9 = _____
4 x 7 = _____	4 x 9 = _____	4 x 6 = _____	4 x 8 = _____
4 x 9 = _____	4 x 7 = _____	4 x 6 = _____	4 x 8 = _____

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Multiply.

6 x 1 = ____	6 x 2 = ____	6 x 3 = ____	6 x 4 = ____
6 x 5 = ____	6 x 6 = ____	6 x 7 = ____	6 x 8 = ____
6 x 9 = ____	6 x 10 = ____	6 x 5 = ____	6 x 6 = ____
6 x 5 = ____	6 x 7 = ____	6 x 5 = ____	6 x 8 = ____
6 x 5 = ____	6 x 9 = ____	6 x 5 = ____	6 x 10 = ____
6 x 6 = ____	6 x 5 = ____	6 x 6 = ____	6 x 7 = ____
6 x 6 = ____	6 x 8 = ____	6 x 6 = ____	6 x 9 = ____
6 x 6 = ____	6 x 7 = ____	6 x 6 = ____	6 x 7 = ____
6 x 8 = ____	6 x 7 = ____	6 x 9 = ____	6 x 7 = ____
6 x 8 = ____	6 x 6 = ____	6 x 8 = ____	6 x 7 = ____
6 x 8 = ____	6 x 9 = ____	6 x 9 = ____	6 x 6 = ____
6 x 9 = ____	6 x 7 = ____	6 x 9 = ____	6 x 8 = ____
6 x 9 = ____	6 x 8 = ____	6 x 6 = ____	6 x 9 = ____
6 x 7 = ____	6 x 9 = ____	6 x 6 = ____	6 x 8 = ____
6 x 9 = ____	6 x 7 = ____	6 x 6 = ____	6 x 8 = ____

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COMMON CORE

engage^{ny}

4.B.44

2

Multiply.

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 6 = _____	7 x 7 = _____	7 x 8 = _____
7 x 9 = _____	7 x 10 = _____	7 x 5 = _____	7 x 6 = _____
7 x 5 = _____	7 x 7 = _____	7 x 5 = _____	7 x 8 = _____
7 x 5 = _____	7 x 9 = _____	7 x 5 = _____	7 x 10 = _____
7 x 6 = _____	7 x 5 = _____	7 x 6 = _____	7 x 7 = _____
7 x 6 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 6 = _____	7 x 7 = _____	7 x 6 = _____	7 x 7 = _____
7 x 8 = _____	7 x 7 = _____	7 x 9 = _____	7 x 7 = _____
7 x 8 = _____	7 x 6 = _____	7 x 8 = _____	7 x 7 = _____
7 x 8 = _____	7 x 9 = _____	7 x 9 = _____	7 x 6 = _____
7 x 9 = _____	7 x 7 = _____	7 x 9 = _____	7 x 8 = _____
7 x 9 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 7 = _____	7 x 9 = _____	7 x 6 = _____	7 x 8 = _____
7 x 9 = _____	7 x 7 = _____	7 x 6 = _____	7 x 8 = _____

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4.D.8

3

4

Multiply.

8 x 1 = _____   8 x 2 = _____   8 x 3 = _____   8 x 4 = _____

8 x 5 = _____   8 x 6 = _____   8 x 7 = _____   8 x 8 = _____

8 x 9 = _____   8 x 10 = _____   8 x 5 = _____   8 x 6 = _____

8 x 5 = _____   8 x 7 = _____   8 x 5 = _____   8 x 8 = _____

8 x 5 = _____   8 x 9 = _____   8 x 5 = _____   8 x 10 = _____

8 x 6 = _____   8 x 5 = _____   8 x 6 = _____   8 x 7 = _____

8 x 6 = _____   8 x 8 = _____   8 x 6 = _____   8 x 9 = _____

8 x 6 = _____   8 x 7 = _____   8 x 6 = _____   8 x 7 = _____

8 x 8 = _____   8 x 7 = _____   8 x 9 = _____   8 x 7 = _____

8 x 8 = _____   8 x 6 = _____   8 x 8 = _____   8 x 7 = _____

8 x 8 = _____   8 x 9 = _____   8 x 9 = _____   8 x 6 = _____

8 x 9 = _____   8 x 7 = _____   8 x 9 = _____   8 x 8 = _____

8 x 9 = _____   8 x 8 = _____   8 x 6 = _____   8 x 9 = _____

8 x 7 = _____   8 x 9 = _____   8 x 6 = _____   8 x 8 = _____

8 x 9 = _____   8 x 7 = _____   8 x 6 = _____   8 x 8 = _____

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COMMON CORE   Lesson 14:   Find areas by decomposing into rectangles or completing composite
                             figures to form rectangles.
                 Date: 10/1/13

engage^ny

4.D.32

4

Multiply.

9 x 1 = _____	9 x 2 = _____	9 x 3 = _____	9 x 4 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 1 = _____
9 x 3 = _____	9 x 1 = _____	9 x 4 = _____	9 x 1 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 2 = _____	9 x 4 = _____	9 x 2 = _____	9 x 5 = _____
9 x 2 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 1 = _____	9 x 3 = _____	9 x 2 = _____	9 x 3 = _____
9 x 4 = _____	9 x 3 = _____	9 x 5 = _____	9 x 3 = _____
9 x 4 = _____	9 x 1 = _____	9 x 4 = _____	9 x 2 = _____
9 x 4 = _____	9 x 3 = _____	9 x 4 = _____	9 x 5 = _____
9 x 4 = _____	9 x 5 = _____	9 x 1 = _____	9 x 5 = _____
9 x 2 = _____	9 x 5 = _____	9 x 3 = _____	9 x 5 = _____
9 x 4 = _____	9 x 2 = _____	9 x 4 = _____	9 x 3 = _____
9 x 5 = _____	9 x 3 = _____	9 x 2 = _____	9 x 4 = _____
9 x 3 = _____	9 x 5 = _____	9 x 2 = _____	9 x 4 = _____

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5

Multiply.

9 x 1 = _____   9 x 2 = _____   9 x 3 = _____   9 x 4 = _____

9 x 5 = _____   9 x 6 = _____   9 x 7 = _____   9 x 8 = _____

9 x 9 = _____   9 x 10 = _____   9 x 5 = _____   9 x 6 = _____

9 x 5 = _____   9 x 7 = _____   9 x 5 = _____   9 x 8 = _____

9 x 5 = _____   9 x 9 = _____   9 x 5 = _____   9 x 10 = _____

9 x 6 = _____   9 x 5 = _____   9 x 6 = _____   9 x 7 = _____

9 x 6 = _____   9 x 8 = _____   9 x 6 = _____   9 x 9 = _____

9 x 6 = _____   9 x 7 = _____   9 x 6 = _____   9 x 7 = _____

9 x 8 = _____   9 x 7 = _____   9 x 9 = _____   9 x 7 = _____

9 x 8 = _____   9 x 6 = _____   9 x 8 = _____   9 x 7 = _____

9 x 8 = _____   9 x 9 = _____   9 x 9 = _____   9 x 6 = _____

9 x 9 = _____   9 x 7 = _____   9 x 9 = _____   9 x 8 = _____

9 x 9 = _____   9 x 8 = _____   9 x 6 = _____   9 x 9 = _____

9 x 7 = _____   9 x 9 = _____   9 x 6 = _____   9 x 8 = _____

9 x 9 = _____   9 x 7 = _____   9 x 6 = _____   9 x 8 = _____

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4.D.53

6

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 1 = _____
7 x 3 = _____	7 x 1 = _____	7 x 4 = _____	7 x 1 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 2 = _____	7 x 4 = _____	7 x 2 = _____	7 x 5 = _____
7 x 2 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 1 = _____	7 x 3 = _____	7 x 2 = _____	7 x 3 = _____
7 x 4 = _____	7 x 3 = _____	7 x 5 = _____	7 x 3 = _____
7 x 4 = _____	7 x 1 = _____	7 x 4 = _____	7 x 2 = _____
7 x 4 = _____	7 x 3 = _____	7 x 4 = _____	7 x 5 = _____
7 x 4 = _____	7 x 5 = _____	7 x 1 = _____	7 x 5 = _____
7 x 2 = _____	7 x 5 = _____	7 x 3 = _____	7 x 5 = _____
7 x 4 = _____	7 x 2 = _____	7 x 4 = _____	7 x 3 = _____
7 x 5 = _____	7 x 3 = _____	7 x 2 = _____	7 x 4 = _____
7 x 3 = _____	7 x 5 = _____	7 x 2 = _____	7 x 4 = _____

COMMON CORE

Lesson 20: Recognize and Show that Equivalent Fractions Have the Same Size, Though Not Necessarily the Same Shape

Date: 2/1/13

23

engage^{ny}

5.E.8

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 6 = _____	7 x 7 = _____	7 x 8 = _____
7 x 9 = _____	7 x 10 = _____	7 x 5 = _____	7 x 6 = _____
7 x 5 = _____	7 x 7 = _____	7 x 5 = _____	7 x 8 = _____
7 x 5 = _____	7 x 9 = _____	7 x 5 = _____	7 x 10 = _____
7 x 6 = _____	7 x 5 = _____	7 x 6 = _____	7 x 7 = _____
7 x 6 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 6 = _____	7 x 7 = _____	7 x 6 = _____	7 x 7 = _____
7 x 8 = _____	7 x 7 = _____	7 x 9 = _____	7 x 7 = _____
7 x 8 = _____	7 x 6 = _____	7 x 8 = _____	7 x 7 = _____
7 x 8 = _____	7 x 9 = _____	7 x 9 = _____	7 x 6 = _____
7 x 9 = _____	7 x 7 = _____	7 x 9 = _____	7 x 8 = _____
7 x 9 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 7 = _____	7 x 9 = _____	7 x 6 = _____	7 x 8 = _____
7 x 9 = _____	7 x 7 = _____	7 x 6 = _____	7 x 8 = _____

Lesson 20: Recognize and Show that Equivalent Fractions Have the Same Size, Though Not Necessarily the Same Shape

Date: 2/1/13

24

engage**ny** 5.E.9

Multiply.

3 x 1 = _____   3 x 2 = _____   3 x 3 = _____   3 x 4 = _____

3 x 5 = _____   3 x 1 = _____   3 x 2 = _____   3 x 1 = _____

3 x 3 = _____   3 x 1 = _____   3 x 4 = _____   3 x 1 = _____

3 x 5 = _____   3 x 1 = _____   3 x 2 = _____   3 x 3 = _____

3 x 2 = _____   3 x 4 = _____   3 x 2 = _____   3 x 5 = _____

3 x 2 = _____   3 x 1 = _____   3 x 2 = _____   3 x 3 = _____

3 x 1 = _____   3 x 3 = _____   3 x 2 = _____   3 x 3 = _____

3 x 4 = _____   3 x 3 = _____   3 x 5 = _____   3 x 3 = _____

3 x 4 = _____   3 x 1 = _____   3 x 4 = _____   3 x 2 = _____

3 x 4 = _____   3 x 3 = _____   3 x 4 = _____   3 x 5 = _____

3 x 4 = _____   3 x 5 = _____   3 x 1 = _____   3 x 5 = _____

3 x 2 = _____   3 x 5 = _____   3 x 3 = _____   3 x 5 = _____

3 x 4 = _____   3 x 2 = _____   3 x 4 = _____   3 x 3 = _____

3 x 5 = _____   3 x 3 = _____   3 x 2 = _____   3 x 4 = _____

3 x 3 = _____   3 x 5 = _____   3 x 2 = _____   3 x 4 = _____

1

Multiply.

3 x 1 = _____   3 x 2 = _____   3 x 3 = _____   3 x 4 = _____

3 x 5 = _____   3 x 6 = _____   3 x 7 = _____   3 x 8 = _____

3 x 9 = _____   3 x 10 = _____   3 x 5 = _____   3 x 6 = _____

3 x 5 = _____   3 x 7 = _____   3 x 5 = _____   3 x 8 = _____

3 x 5 = _____   3 x 9 = _____   3 x 5 = _____   3 x 10 = _____

3 x 6 = _____   3 x 5 = _____   3 x 6 = _____   3 x 7 = _____

3 x 6 = _____   3 x 8 = _____   3 x 6 = _____   3 x 9 = _____

3 x 6 = _____   3 x 7 = _____   3 x 6 = _____   3 x 7 = _____

3 x 8 = _____   3 x 7 = _____   3 x 9 = _____   3 x 7 = _____

3 x 8 = _____   3 x 6 = _____   3 x 8 = _____   3 x 7 = _____

3 x 8 = _____   3 x 9 = _____   3 x 9 = _____   3 x 6 = _____

3 x 9 = _____   3 x 7 = _____   3 x 9 = _____   3 x 8 = _____

3 x 9 = _____   3 x 8 = _____   3 x 6 = _____   3 x 9 = _____

3 x 7 = _____   3 x 9 = _____   3 x 6 = _____   3 x 8 = _____

3 x 9 = _____   3 x 7 = _____   3 x 6 = _____   3 x 8 = _____

Lesson 2: Solve word problems in varied contexts using a letter to represent the unknown.

Date: 1/29/14

2

engage^{ny}   7.A.21

Multiply.

4 x 1 = _____	4 x 2 = _____	4 x 3 = _____	4 x 4 = _____
4 x 5 = _____	4 x 6 = _____	4 x 7 = _____	4 x 8 = _____
4 x 9 = _____	4 x 10 = _____	4 x 5 = _____	4 x 6 = _____
4 x 5 = _____	4 x 7 = _____	4 x 5 = _____	4 x 8 = _____
4 x 5 = _____	4 x 9 = _____	4 x 5 = _____	4 x 10 = _____
4 x 6 = _____	4 x 5 = _____	4 x 6 = _____	4 x 7 = _____
4 x 6 = _____	4 x 8 = _____	4 x 6 = _____	4 x 9 = _____
4 x 6 = _____	4 x 7 = _____	4 x 6 = _____	4 x 7 = _____
4 x 8 = _____	4 x 7 = _____	4 x 9 = _____	4 x 7 = _____
4 x 8 = _____	4 x 6 = _____	4 x 8 = _____	4 x 7 = _____
4 x 8 = _____	4 x 9 = _____	4 x 9 = _____	4 x 6 = _____
4 x 9 = _____	4 x 7 = _____	4 x 9 = _____	4 x 8 = _____
4 x 9 = _____	4 x 8 = _____	4 x 6 = _____	4 x 9 = _____
4 x 7 = _____	4 x 9 = _____	4 x 6 = _____	4 x 8 = _____
4 x 9 = _____	4 x 7 = _____	4 x 6 = _____	4 x 8 = _____

Multiply.

5 x 1 = _____	5 x 2 = _____	5 x 3 = _____	5 x 4 = _____
5 x 5 = _____	5 x 1 = _____	5 x 2 = _____	5 x 1 = _____
5 x 3 = _____	5 x 1 = _____	5 x 4 = _____	5 x 1 = _____
5 x 5 = _____	5 x 1 = _____	5 x 2 = _____	5 x 3 = _____
5 x 2 = _____	5 x 4 = _____	5 x 2 = _____	5 x 5 = _____
5 x 2 = _____	5 x 1 = _____	5 x 2 = _____	5 x 3 = _____
5 x 1 = _____	5 x 3 = _____	5 x 2 = _____	5 x 3 = _____
5 x 4 = _____	5 x 3 = _____	5 x 5 = _____	5 x 3 = _____
5 x 4 = _____	5 x 1 = _____	5 x 4 = _____	5 x 2 = _____
5 x 4 = _____	5 x 3 = _____	5 x 4 = _____	5 x 5 = _____
5 x 4 = _____	5 x 5 = _____	5 x 1 = _____	5 x 5 = _____
5 x 2 = _____	5 x 5 = _____	5 x 3 = _____	5 x 5 = _____
5 x 4 = _____	5 x 2 = _____	5 x 4 = _____	5 x 3 = _____
5 x 5 = _____	5 x 3 = _____	5 x 2 = _____	5 x 4 = _____
5 x 3 = _____	5 x 5 = _____	5 x 2 = _____	5 x 4 = _____

Lesson 5: Compare and classify other polygons.
Date: 1/29/14

4

7.B.23

Multiply.

5 x 1 = ____	5 x 2 = ____	5 x 3 = ____	5 x 4 = ____
5 x 5 = ____	5 x 6 = ____	5 x 7 = ____	5 x 8 = ____
5 x 9 = ____	5 x 10 = ____	5 x 5 = ____	5 x 6 = ____
5 x 5 = ____	5 x 7 = ____	5 x 5 = ____	5 x 8 = ____
5 x 5 = ____	5 x 9 = ____	5 x 5 = ____	5 x 10 = ____
5 x 6 = ____	5 x 5 = ____	5 x 6 = ____	5 x 7 = ____
5 x 6 = ____	5 x 8 = ____	5 x 6 = ____	5 x 9 = ____
5 x 6 = ____	5 x 7 = ____	5 x 6 = ____	5 x 7 = ____
5 x 8 = ____	5 x 7 = ____	5 x 9 = ____	5 x 7 = ____
5 x 8 = ____	5 x 6 = ____	5 x 8 = ____	5 x 7 = ____
5 x 8 = ____	5 x 9 = ____	5 x 9 = ____	5 x 6 = ____
5 x 9 = ____	5 x 7 = ____	5 x 9 = ____	5 x 8 = ____
5 x 9 = ____	5 x 8 = ____	5 x 6 = ____	5 x 9 = ____
5 x 7 = ____	5 x 9 = ____	5 x 6 = ____	5 x 8 = ____
5 x 9 = ____	5 x 7 = ____	5 x 6 = ____	5 x 8 = ____

COMMON CORE

Lesson 7: Reason about composing and decomposing polygons using tetrominoes.

Date: 1/29/14

engage^ny 7.B.55

5

Multiply.

6 x 1 = _____	6 x 2 = _____	6 x 3 = _____	6 x 4 = _____
6 x 5 = _____	6 x 1 = _____	6 x 2 = _____	6 x 1 = _____
6 x 3 = _____	6 x 1 = _____	6 x 4 = _____	6 x 1 = _____
6 x 5 = _____	6 x 1 = _____	6 x 2 = _____	6 x 3 = _____
6 x 2 = _____	6 x 4 = _____	6 x 2 = _____	6 x 5 = _____
6 x 2 = _____	6 x 1 = _____	6 x 2 = _____	6 x 3 = _____
6 x 1 = _____	6 x 3 = _____	6 x 2 = _____	6 x 3 = _____
6 x 4 = _____	6 x 3 = _____	6 x 5 = _____	6 x 3 = _____
6 x 4 = _____	6 x 1 = _____	6 x 4 = _____	6 x 2 = _____
6 x 4 = _____	6 x 3 = _____	6 x 4 = _____	6 x 5 = _____
6 x 4 = _____	6 x 5 = _____	6 x 1 = _____	6 x 5 = _____
6 x 2 = _____	6 x 5 = _____	6 x 3 = _____	6 x 5 = _____
6 x 4 = _____	6 x 2 = _____	6 x 4 = _____	6 x 3 = _____
6 x 5 = _____	6 x 3 = _____	6 x 2 = _____	6 x 4 = _____
6 x 3 = _____	6 x 5 = _____	6 x 2 = _____	6 x 4 = _____

Multiply.

6 x 1 = _____	6 x 2 = _____	6 x 3 = _____	6 x 4 = _____
6 x 5 = _____	6 x 6 = _____	6 x 7 = _____	6 x 8 = _____
6 x 9 = _____	6 x 10 = _____	6 x 5 = _____	6 x 6 = _____
6 x 5 = _____	6 x 7 = _____	6 x 5 = _____	6 x 8 = _____
6 x 5 = _____	6 x 9 = _____	6 x 5 = _____	6 x 10 = _____
6 x 6 = _____	6 x 5 = _____	6 x 6 = _____	6 x 7 = _____
6 x 6 = _____	6 x 8 = _____	6 x 6 = _____	6 x 9 = _____
6 x 6 = _____	6 x 7 = _____	6 x 6 = _____	6 x 7 = _____
6 x 8 = _____	6 x 7 = _____	6 x 9 = _____	6 x 7 = _____
6 x 8 = _____	6 x 6 = _____	6 x 8 = _____	6 x 7 = _____
6 x 8 = _____	6 x 9 = _____	6 x 9 = _____	6 x 6 = _____
6 x 9 = _____	6 x 7 = _____	6 x 9 = _____	6 x 8 = _____
6 x 9 = _____	6 x 8 = _____	6 x 6 = _____	6 x 9 = _____
6 x 7 = _____	6 x 9 = _____	6 x 6 = _____	6 x 8 = _____
6 x 9 = _____	6 x 7 = _____	6 x 6 = _____	6 x 8 = _____

COMMON CORE

Lesson 9: Reason about composing and decomposing polygons using tangrams.
Date: 1/29/14

engage^{ny}

7.B.83

Multiply.

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 1 = _____
7 x 3 = _____	7 x 1 = _____	7 x 4 = _____	7 x 1 = _____
7 x 5 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 2 = _____	7 x 4 = _____	7 x 2 = _____	7 x 5 = _____
7 x 2 = _____	7 x 1 = _____	7 x 2 = _____	7 x 3 = _____
7 x 1 = _____	7 x 3 = _____	7 x 2 = _____	7 x 3 = _____
7 x 4 = _____	7 x 3 = _____	7 x 5 = _____	7 x 3 = _____
7 x 4 = _____	7 x 1 = _____	7 x 4 = _____	7 x 2 = _____
7 x 4 = _____	7 x 3 = _____	7 x 4 = _____	7 x 5 = _____
7 x 4 = _____	7 x 5 = _____	7 x 1 = _____	7 x 5 = _____
7 x 2 = _____	7 x 5 = _____	7 x 3 = _____	7 x 5 = _____
7 x 4 = _____	7 x 2 = _____	7 x 4 = _____	7 x 3 = _____
7 x 5 = _____	7 x 3 = _____	7 x 2 = _____	7 x 4 = _____
7 x 3 = _____	7 x 5 = _____	7 x 2 = _____	7 x 4 = _____

Lesson 10: Decompose quadrilaterals to understand perimeter as the boundary of a shape.

Date: 1/29/14

engage^ny   7.C.9

Multiply.

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 6 = _____	7 x 7 = _____	7 x 8 = _____
7 x 9 = _____	7 x 10 = _____	7 x 5 = _____	7 x 6 = _____
7 x 5 = _____	7 x 7 = _____	7 x 5 = _____	7 x 8 = _____
7 x 5 = _____	7 x 9 = _____	7 x 5 = _____	7 x 10 = _____
7 x 6 = _____	7 x 5 = _____	7 x 6 = _____	7 x 7 = _____
7 x 6 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 6 = _____	7 x 7 = _____	7 x 6 = _____	7 x 7 = _____
7 x 8 = _____	7 x 7 = _____	7 x 9 = _____	7 x 7 = _____
7 x 8 = _____	7 x 6 = _____	7 x 8 = _____	7 x 7 = _____
7 x 8 = _____	7 x 9 = _____	7 x 9 = _____	7 x 6 = _____
7 x 9 = _____	7 x 7 = _____	7 x 9 = _____	7 x 8 = _____
7 x 9 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 7 = _____	7 x 9 = _____	7 x 6 = _____	7 x 8 = _____
7 x 9 = _____	7 x 7 = _____	7 x 6 = _____	7 x 8 = _____

Multiply.

8 x 1 = _____	8 x 2 = _____	8 x 3 = _____	8 x 4 = _____
8 x 5 = _____	8 x 1 = _____	8 x 2 = _____	8 x 1 = _____
8 x 3 = _____	8 x 1 = _____	8 x 4 = _____	8 x 1 = _____
8 x 5 = _____	8 x 1 = _____	8 x 2 = _____	8 x 3 = _____
8 x 2 = _____	8 x 4 = _____	8 x 2 = _____	8 x 5 = _____
8 x 2 = _____	8 x 1 = _____	8 x 2 = _____	8 x 3 = _____
8 x 1 = _____	8 x 3 = _____	8 x 2 = _____	8 x 3 = _____
8 x 4 = _____	8 x 3 = _____	8 x 5 = _____	8 x 3 = _____
8 x 4 = _____	8 x 1 = _____	8 x 4 = _____	8 x 2 = _____
8 x 4 = _____	8 x 3 = _____	8 x 4 = _____	8 x 5 = _____
8 x 4 = _____	8 x 5 = _____	8 x 1 = _____	8 x 5 = _____
8 x 2 = _____	8 x 5 = _____	8 x 3 = _____	8 x 5 = _____
8 x 4 = _____	8 x 2 = _____	8 x 4 = _____	8 x 3 = _____
8 x 5 = _____	8 x 3 = _____	8 x 2 = _____	8 x 4 = _____
8 x 3 = _____	8 x 5 = _____	8 x 2 = _____	8 x 4 = _____

10

Multiply.

9 x 1 = _____	9 x 2 = _____	9 x 3 = _____	9 x 4 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 1 = _____
9 x 3 = _____	9 x 1 = _____	9 x 4 = _____	9 x 1 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 2 = _____	9 x 4 = _____	9 x 2 = _____	9 x 5 = _____
9 x 2 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 1 = _____	9 x 3 = _____	9 x 2 = _____	9 x 3 = _____
9 x 4 = _____	9 x 3 = _____	9 x 5 = _____	9 x 3 = _____
9 x 4 = _____	9 x 1 = _____	9 x 4 = _____	9 x 2 = _____
9 x 4 = _____	9 x 3 = _____	9 x 4 = _____	9 x 5 = _____
9 x 4 = _____	9 x 5 = _____	9 x 1 = _____	9 x 5 = _____
9 x 2 = _____	9 x 5 = _____	9 x 3 = _____	9 x 5 = _____
9 x 4 = _____	9 x 2 = _____	9 x 4 = _____	9 x 3 = _____
9 x 5 = _____	9 x 3 = _____	9 x 2 = _____	9 x 4 = _____
9 x 3 = _____	9 x 5 = _____	9 x 2 = _____	9 x 4 = _____

Multiply.

8 x 1 = _____   8 x 2 = _____   8 x 3 = _____   8 x 4 = _____

8 x 5 = _____   8 x 6 = _____   8 x 7 = _____   8 x 8 = _____

8 x 9 = _____   8 x 10 = _____   8 x 5 = _____   8 x 6 = _____

8 x 5 = _____   8 x 7 = _____   8 x 5 = _____   8 x 8 = _____

8 x 5 = _____   8 x 9 = _____   8 x 5 = _____   8 x 10 = _____

8 x 6 = _____   8 x 5 = _____   8 x 6 = _____   8 x 7 = _____

8 x 6 = _____   8 x 8 = _____   8 x 6 = _____   8 x 9 = _____

8 x 6 = _____   8 x 7 = _____   8 x 6 = _____   8 x 7 = _____

8 x 8 = _____   8 x 7 = _____   8 x 9 = _____   8 x 7 = _____

8 x 8 = _____   8 x 6 = _____   8 x 8 = _____   8 x 7 = _____

8 x 8 = _____   8 x 9 = _____   8 x 9 = _____   8 x 6 = _____

8 x 9 = _____   8 x 7 = _____   8 x 9 = _____   8 x 8 = _____

8 x 9 = _____   8 x 8 = _____   8 x 6 = _____   8 x 9 = _____

8 x 7 = _____   8 x 9 = _____   8 x 6 = _____   8 x 8 = _____

8 x 9 = _____   8 x 7 = _____   8 x 6 = _____   8 x 8 = _____

COMMON CORE | Lesson 15: Solve word problems to determine perimeter with given side lengths.
Date: 1/29/14

engage^ny   7.C.64

12

Multiply.

9 x 1 = _____	9 x 2 = _____	9 x 3 = _____	9 x 4 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 1 = _____
9 x 3 = _____	9 x 1 = _____	9 x 4 = _____	9 x 1 = _____
9 x 5 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 2 = _____	9 x 4 = _____	9 x 2 = _____	9 x 5 = _____
9 x 2 = _____	9 x 1 = _____	9 x 2 = _____	9 x 3 = _____
9 x 1 = _____	9 x 3 = _____	9 x 2 = _____	9 x 3 = _____
9 x 4 = _____	9 x 3 = _____	9 x 5 = _____	9 x 3 = _____
9 x 4 = _____	9 x 1 = _____	9 x 4 = _____	9 x 2 = _____
9 x 4 = _____	9 x 3 = _____	9 x 4 = _____	9 x 5 = _____
9 x 4 = _____	9 x 5 = _____	9 x 1 = _____	9 x 5 = _____
9 x 2 = _____	9 x 5 = _____	9 x 3 = _____	9 x 5 = _____
9 x 4 = _____	9 x 2 = _____	9 x 4 = _____	9 x 3 = _____
9 x 5 = _____	9 x 3 = _____	9 x 2 = _____	9 x 4 = _____
9 x 3 = _____	9 x 5 = _____	9 x 2 = _____	9 x 4 = _____

COMMON CORE | Lesson 16: Use string to measure the perimeter of various circles to the nearest quarter inch.
Date: 1/29/14
13
engage^ny 7.C.76

Multiply.

6 x 1 = _____   6 x 2 = _____   6 x 3 = _____   6 x 4 = _____

6 x 5 = _____   6 x 6 = _____   6 x 7 = _____   6 x 8 = _____

6 x 9 = _____   6 x 10 = _____   6 x 5 = _____   6 x 6 = _____

6 x 5 = _____   6 x 7 = _____   6 x 5 = _____   6 x 8 = _____

6 x 5 = _____   6 x 9 = _____   6 x 5 = _____   6 x 10 = _____

6 x 6 = _____   6 x 5 = _____   6 x 6 = _____   6 x 7 = _____

6 x 6 = _____   6 x 8 = _____   6 x 6 = _____   6 x 9 = _____

6 x 6 = _____   6 x 7 = _____   6 x 6 = _____   6 x 7 = _____

6 x 8 = _____   6 x 7 = _____   6 x 9 = _____   6 x 7 = _____

6 x 8 = _____   6 x 6 = _____   6 x 8 = _____   6 x 7 = _____

6 x 8 = _____   6 x 9 = _____   6 x 9 = _____   6 x 6 = _____

6 x 9 = _____   6 x 7 = _____   6 x 9 = _____   6 x 8 = _____

6 x 9 = _____   6 x 8 = _____   6 x 6 = _____   6 x 9 = _____

6 x 7 = _____   6 x 9 = _____   6 x 6 = _____   6 x 8 = _____

6 x 9 = _____   6 x 7 = _____   6 x 6 = _____   6 x 8 = _____

COMMON CORE

Lesson 24: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Date: 1/29/14

engage^ny   7.E.18

22

Multiply.

7 x 1 = _____	7 x 2 = _____	7 x 3 = _____	7 x 4 = _____
7 x 5 = _____	7 x 6 = _____	7 x 7 = _____	7 x 8 = _____
7 x 9 = _____	7 x 10 = _____	7 x 5 = _____	7 x 6 = _____
7 x 5 = _____	7 x 7 = _____	7 x 5 = _____	7 x 8 = _____
7 x 5 = _____	7 x 9 = _____	7 x 5 = _____	7 x 10 = _____
7 x 6 = _____	7 x 5 = _____	7 x 6 = _____	7 x 7 = _____
7 x 6 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 6 = _____	7 x 7 = _____	7 x 6 = _____	7 x 7 = _____
7 x 8 = _____	7 x 7 = _____	7 x 9 = _____	7 x 7 = _____
7 x 8 = _____	7 x 6 = _____	7 x 8 = _____	7 x 7 = _____
7 x 8 = _____	7 x 9 = _____	7 x 9 = _____	7 x 6 = _____
7 x 9 = _____	7 x 7 = _____	7 x 9 = _____	7 x 8 = _____
7 x 9 = _____	7 x 8 = _____	7 x 6 = _____	7 x 9 = _____
7 x 7 = _____	7 x 9 = _____	7 x 6 = _____	7 x 8 = _____
7 x 9 = _____	7 x 7 = _____	7 x 6 = _____	7 x 8 = _____

COMMON CORE | **Lesson 26:** Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Date: 1/29/14

engageny

7.E.39

25

Multiply.

8 x 1 = _____	8 x 2 = _____	8 x 3 = _____	8 x 4 = _____
8 x 5 = _____	8 x 6 = _____	8 x 7 = _____	8 x 8 = _____
8 x 9 = _____	8 x 10 = _____	8 x 5 = _____	8 x 6 = _____
8 x 5 = _____	8 x 7 = _____	8 x 5 = _____	8 x 8 = _____
8 x 5 = _____	8 x 9 = _____	8 x 5 = _____	8 x 10 = _____
8 x 6 = _____	8 x 5 = _____	8 x 6 = _____	8 x 7 = _____
8 x 6 = _____	8 x 8 = _____	8 x 6 = _____	8 x 9 = _____
8 x 6 = _____	8 x 7 = _____	8 x 6 = _____	8 x 7 = _____
8 x 8 = _____	8 x 7 = _____	8 x 9 = _____	8 x 7 = _____
8 x 8 = _____	8 x 6 = _____	8 x 8 = _____	8 x 7 = _____
8 x 8 = _____	8 x 9 = _____	8 x 9 = _____	8 x 6 = _____
8 x 9 = _____	8 x 7 = _____	8 x 9 = _____	8 x 8 = _____
8 x 9 = _____	8 x 8 = _____	8 x 6 = _____	8 x 9 = _____
8 x 7 = _____	8 x 9 = _____	8 x 6 = _____	8 x 8 = _____
8 x 9 = _____	8 x 7 = _____	8 x 6 = _____	8 x 8 = _____

Lesson 28: Solve a variety of word problems involving area and perimeter using all four operations.

Date: 1/29/14

28

engage^{ny} 7.E.65

Multiply.

9 x 1 = _____	9 x 2 = _____	9 x 3 = _____	9 x 4 = _____
9 x 5 = _____	9 x 6 = _____	9 x 7 = _____	9 x 8 = _____
9 x 9 = _____	9 x 10 = _____	9 x 5 = _____	9 x 6 = _____
9 x 5 = _____	9 x 7 = _____	9 x 5 = _____	9 x 8 = _____
9 x 5 = _____	9 x 9 = _____	9 x 5 = _____	9 x 10 = _____
9 x 6 = _____	9 x 5 = _____	9 x 6 = _____	9 x 7 = _____
9 x 6 = _____	9 x 8 = _____	9 x 6 = _____	9 x 9 = _____
9 x 6 = _____	9 x 7 = _____	9 x 6 = _____	9 x 7 = _____
9 x 8 = _____	9 x 7 = _____	9 x 9 = _____	9 x 7 = _____
9 x 8 = _____	9 x 6 = _____	9 x 8 = _____	9 x 7 = _____
9 x 8 = _____	9 x 9 = _____	9 x 9 = _____	9 x 6 = _____
9 x 9 = _____	9 x 7 = _____	9 x 9 = _____	9 x 8 = _____
9 x 9 = _____	9 x 8 = _____	9 x 6 = _____	9 x 9 = _____
9 x 7 = _____	9 x 9 = _____	9 x 6 = _____	9 x 8 = _____
9 x 9 = _____	9 x 7 = _____	9 x 6 = _____	9 x 8 = _____

Appendix B

B

Improvement _____   # Correct _____

Solve.

1	5 + 5 =		23	8 + 8 =	
2	2 fives =		24	2 eights =	
3	2 + 2 =		25	7 + 7 =	
4	2 twos =		26	2 sevens =	
5	5 + 5 + 5 =		27	9 + 9 =	
6	3 fives =		28	2 nines =	
7	5 + 5 + 5 + 5 =		29	3 + 3 + 3 + 3 =	
8	4 fives =		30	4 threes =	
9	2 + 2 + 2 =		31	4 + 4 + 4 =	
10	3 twos =		32	3 fours =	
11	2 + 2 + 2 + 2 =		33	3 + 3 + 3 =	
12	4 twos =		34	3 threes =	
13	2 threes =		35	4 fives =	
14	3 + 3 =		36	4 + 4 + 4 + 4 + 4 =	
15	2 sixes =		37	3 sevens =	
16	6 + 6 =		38	7 + 7 + 7 =	
17	2 fours =		39	3 nines =	
18	4 + 4 =		40	9 + 9 + 9 =	
19	5 fives =		41	3 sixes =	
20	5 + 5 + 5 + 5 + 5 =		42	6 + 6 + 6 =	
21	5 twos =		43	3 eights =	
22	2 + 2 + 2 + 2 + 2 =		44	8 + 8 + 8 =	

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COMMON CORE

Lesson 3: Interpret the meaning of factors–the size of the group or the number of groups.

Date: 5/6/13

4

engage^{ny}

A

Add or multiply.

Correct _____

1	$5 + 5 + 5 =$	23	$3 + 3 + 3 + 3 =$
2	$3 \times 5 =$	24	$4 \times 3 =$
3	$5 \times 3 =$	25	$3 \times 4 =$
4	$2 + 2 + 2 =$	26	$3 + 3 + 3 =$
5	$3 \times 2 =$	27	$3 \times 3 =$
6	$2 \times 3 =$	28	$3 + 3 + 3 + 3 + 3 =$
7	$5 + 5 =$	29	$5 \times 3 =$
8	$2 \times 5 =$	30	$3 \times 5 =$
9	$5 \times 2 =$	31	$7 + 7 =$
10	$2 + 2 + 2 + 2 =$	32	$2 \times 7 =$
11	$4 \times 2 =$	33	$7 \times 2 =$
12	$2 \times 4 =$	34	$9 + 9 =$
13	$2 + 2 + 2 + 2 + 2 =$	35	$2 \times 9 =$
14	$5 \times 2 =$	36	$9 \times 2 =$
15	$2 \times 5 =$	37	$6 + 6 =$
16	$3 + 3 =$	38	$6 \times 2 =$
17	$2 \times 3 =$	39	$2 \times 6 =$
18	$3 \times 2 =$	40	$8 + 8 =$
19	$5 + 5 + 5 + 5 =$	41	$2 \times 8 =$
20	$4 \times 5 =$	42	$8 \times 2 =$
21	$5 \times 4 =$	43	$7 + 7 + 7 + 7 =$
22	$2 \times 2 =$	44	$4 \times 7 =$

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COMMON CORE

Lesson 4: Understand the meaning of the unknown as the size of the group in division.

Date: 5/6/13

engage^{ny}

1.B.9

B

Improvement _____   # Correct _____

Add or multiply.

1	2 + 2 + 2 =	23	4 + 4 + 4 =
2	3 x 2 =	24	3 x 4 =
3	2 x 3 =	25	4 x 3 =
4	5 + 5 + 5 =	26	4 + 4 + 4 + 4 =
5	3 x 5 =	27	4 x 4 =
6	5 x 3 =	28	4 + 4 + 4 + 4 + 4 =
7	2 + 2 + 2 + 2 =	29	4 x 5 =
8	4 x 2 =	30	5 x 4 =
9	2 x 4 =	31	6 + 6 =
10	5 + 5 =	32	6 x 2 =
11	2 x 5 =	33	2 x 6 =
12	5 x 2 =	34	8 + 8 =
13	3 + 3 =	35	2 x 8 =
14	2 x 3 =	36	8 x 2 =
15	3 x 2 =	37	7 + 7 =
16	2 + 2 + 2 + 2 + 2 =	38	2 x 7 =
17	5 x 2 =	39	7 x 2 =
18	2 x 5 =	40	9 + 9 =
19	5 + 5 + 5 + 5 =	41	2 x 9 =
20	4 x 5 =	42	9 x 2 =
21	5 x 4 =	43	6 + 6 + 6 + 6 =
22	2 x 2 =	44	4 x 6 =

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COMMON CORE   **Lesson 4:** Understand the meaning of the unknown as the size of the group in division.

Date: 5/6/13

engage^ny   **1.B.10**

6

A

Solve.

Correct _____

1	2 x 2 =		23	___ x 2 = 20	
2	3 x 2 =		24	___ x 2 = 4	
3	4 x 2 =		25	___ x 2 = 6	
4	5 x 2 =		26	20 ÷ 2 =	
5	1 x 2 =		27	10 ÷ 2 =	
6	4 ÷ 2 =		28	2 ÷ 2 =	
7	6 ÷ 2 =		29	4 ÷ 2 =	
8	10 ÷ 2 =		30	6 ÷ 2 =	
9	2 ÷ 2 =		31	___ x 2 = 12	
10	8 ÷ 2 =		32	___ x 2 = 14	
11	6 x 2 =		33	___ x 2 = 18	
12	7 x 2 =		34	___ x 2 = 16	
13	8 x 2 =		35	14 ÷ 2 =	
14	9 x 2 =		36	18 ÷ 2 =	
15	10 x 2 =		37	12 ÷ 2 =	
16	16 ÷ 2 =		38	16 ÷ 2 =	
17	14 ÷ 2 =		39	11 x 2 =	
18	18 ÷ 2 =		40	22 ÷ 2 =	
19	12 ÷ 2 =		41	12 x 2 =	
20	20 ÷ 2 =		42	24 ÷ 2 =	
21	___ x 2 = 10		43	14 x 2 =	
22	___ x 2 = 2		44	28 ÷ 2 =	

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Lesson 13: Interpret the quotient as the number of groups or the number of objects in each group using units of 3.

Date: 5/6/13

engage^{ny}

1.D.31

B

Solve.

Improvement _____   # Correct _____

1	1 x 2 =		23	___ x 2 = 4	
2	2 x 2 =		24	___ x 2 = 20	
3	3 x 2 =		25	___ x 2 = 6	
4	4 x 2 =		26	4 ÷ 2 =	
5	5 x 2 =		27	2 ÷ 2 =	
6	6 ÷ 2 =		28	20 ÷ 2 =	
7	4 ÷ 2 =		29	10 ÷ 2 =	
8	8 ÷ 2 =		30	6 ÷ 2 =	
9	2 ÷ 2 =		31	___ x 2 = 12	
10	10 ÷ 2 =		32	___ x 2 = 16	
11	10 x 2 =		33	___ x 2 = 18	
12	6 x 2 =		34	___ x 2 = 14	
13	7 x 2 =		35	16 ÷ 2 =	
14	8 x 2 =		36	18 ÷ 2 =	
15	9 x 2 =		37	12 ÷ 2 =	
16	14 ÷ 2 =		38	14 ÷ 2 =	
17	12 ÷ 2 =		39	11 x 2 =	
18	16 ÷ 2 =		40	22 ÷ 2 =	
19	20 ÷ 2 =		41	12 x 2 =	
20	18 ÷ 2 =		42	24 ÷ 2 =	
21	___ x 2 = 2		43	13 x 2 =	
22	___ x 2 = 10		44	26 ÷ 2 =	

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COMMON CORE | **Lesson 13:** Interpret the quotient as the number of groups or the number of objects in each group using units of 3.

Date: 5/6/13

12

engage^{ny} .D.32

A

Solve.

Correct _____

1	2 x 3 =		23	__ x 3 = 10	
2	3 x 3 =		24	__ x 3 = 6	
3	4 x 3 =		25	__ x 3 = 9	
4	5 x 3 =		26	30 ÷ 3 =	
5	1 x 3 =		27	15 ÷ 3 =	
6	6 ÷ 3 =		28	3 ÷ 3 =	
7	9 ÷ 3 =		29	6 ÷ 3 =	
8	15 ÷ 3 =		30	9 ÷ 3 =	
9	3 ÷ 3 =		31	__ x 3 = 18	
10	12 ÷ 3 =		32	__ x 3 = 21	
11	6 x 3 =		33	__ x 3 = 27	
12	7 x 3 =		34	__ x 3 = 24	
13	8 x 3 =		35	21 ÷ 3 =	
14	9 x 3 =		36	27 ÷ 3 =	
15	10 x 3 =		37	18 ÷ 3 =	
16	24 ÷ 3 =		38	24 ÷ 3 =	
17	21 ÷ 3 =		39	11 x 3 =	
18	27 ÷ 3 =		40	33 ÷ 3 =	
19	18 ÷ 3 =		41	12 x 3 =	
20	30 ÷ 3 =		42	36 ÷ 3 =	
21	__ x 3 = 15		43	13 x 3 =	
22	__ x 3 = 3		44	39 ÷ 3 =	

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COMMON CORE

Lesson 14: Skip-Count objects in models to build fluency with multiplication facts using units of 4.

Date: 5/6/13

13

engageny | 1.E.7

B

Solve.

Improvement _____   # Correct _____

#			#		
1	1 x 3 =		23	___ x 3 = 6	
2	2 x 3 =		24	___ x 3 = 30	
3	3 x 3 =		25	___ x 3 = 9	
4	4 x 3 =		26	6 ÷ 3 =	
5	5 x 3 =		27	3 ÷ 3 =	
6	9 ÷ 3 =		28	30 ÷ 3 =	
7	6 ÷ 3 =		29	15 ÷ 3 =	
8	12 ÷ 3 =		30	9 ÷ 3 =	
9	3 ÷ 3 =		31	___ x 3 = 18	
10	15 ÷ 3 =		32	___ x 3 = 24	
11	10 x 3 =		33	___ x 3 = 27	
12	6 x 3 =		34	___ x 3 = 21	
13	7 x 3 =		35	24 ÷ 3 =	
14	8 x 3 =		36	27 ÷ 3 =	
15	9 x 3 =		37	18 ÷ 3 =	
16	21 ÷ 3 =		38	21 ÷ 3 =	
17	18 ÷ 3 =		39	11 x 3 =	
18	24 ÷ 3 =		40	33 ÷ 3 =	
19	30 ÷ 3 =		41	12 x 3 =	
20	27 ÷ 3 =		42	36 ÷ 3 =	
21	___ x 3 = 3		43	13 x 3 =	
22	___ x 3 =15		44	39 ÷ 3 =	

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COMMON CORE

Lesson 14: Skip-Count objects in models to build fluency with multiplication facts using units of 4.

Date: 5/6/13

14

engage^{ny}

1.E.8

A   # Correct _____

Multiply or divide.

1	2 x 4 =		23	__ x 4 = 40	
2	3 x 4 =		24	__ x 4 = 8	
3	4 x 4 =		25	__ x 4 = 12	
4	5 x 4 =		26	40 ÷ 4 =	
5	1 x 4 =		27	20 ÷ 4 =	
6	8 ÷ 4 =		28	4 ÷ 4 =	
7	12 ÷ 4 =		29	8 ÷ 4 =	
8	20 ÷ 4 =		30	12 ÷ 4 =	
9	4 ÷ 4 =		31	__ x 4 = 24	
10	16 ÷ 4 =		32	__ x 4 = 28	
11	6 x 4 =		33	__ x 4 = 36	
12	7 x 4 =		34	__ x 4 = 32	
13	8 x 4 =		35	28 ÷ 4 =	
14	9 x 4 =		36	36 ÷ 4 =	
15	10 x 4 =		37	24 ÷ 4 =	
16	32 ÷ 4 =		38	32 ÷ 4 =	
17	28 ÷ 4 =		39	11 x 4 =	
18	36 ÷ 4 =		40	44 ÷ 4 =	
19	24 ÷ 4 =		41	12 ÷ 4 =	
20	40 ÷ 4 =		42	48 ÷ 4 =	
21	__ x 4 = 20		43	14 x 4 =	
22	__ x 4 = 4		44	56 ÷ 4 =	

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engage^{ny}   1.E.40

B

Multply or divide.

Improvement _____   # Correct _____

1	1 x 4 =		23	__ x 4 = 8	
2	2 x 4 =		24	__ x 4 = 40	
3	3 x 4 =		25	__ x 4 = 12	
4	4 x 4 =		26	8 ÷ 4 =	
5	5 x 4 =		27	4 ÷ 4 =	
6	12 ÷ 4 =		28	40 ÷ 4 =	
7	8 ÷ 4 =		29	20 ÷ 4 =	
8	16 ÷ 4 =		30	12 ÷ 4 =	
9	4 ÷ 4 =		31	__ x 4 = 12	
10	20 ÷ 4 =		32	__ x 4 = 16	
11	10 x 4 =		33	__ x 4 = 36	
12	6 x 4 =		34	__ x 4 = 28	
13	7 x 4 =		35	32 ÷ 4 =	
14	8 x 4 =		36	36 ÷ 4 =	
15	9 x 4 =		37	24 ÷ 4 =	
16	28 ÷ 4 =		38	28 ÷ 4 =	
17	24 ÷ 4 =		39	11 x 4 =	
18	32 ÷ 4 =		40	44 ÷ 4 =	
19	40 ÷ 4 =		41	12 x 4 =	
20	36 ÷ 4 =		42	48 ÷ 4 =	
21	__ x 4 = 4		43	13 x 4 =	
22	__ x 4 = 20		44	52 ÷ 4 =	

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engage^{ny}   1.E.41

A

Multiply.

Correct _____

1	2 x 1 =		23	2 x 7 =	
2	2 x 2 =		24	5 x 5 =	
3	2 x 3 =		25	5 x 6 =	
4	4 x 1 =		26	5 x 7 =	
5	4 x 2 =		27	4 x 5 =	
6	4 x 3 =		28	4 x 6 =	
7	1 x 6 =		29	4 x 7 =	
8	2 x 6 =		30	3 x 5 =	
9	1 x 8 =		31	3 x 6 =	
10	2 x 8 =		32	3 x 7 =	
11	3 x 1 =		33	2 x 7 =	
12	3 x 2 =		34	2 x 8 =	
13	3 x 3 =		35	2 x 9 =	
14	5 x 1 =		36	5 x 7 =	
15	5 x 2 =		37	5 x 8 =	
16	5 x 3 =		38	5 x 9 =	
17	1 x 7 =		39	4 x 7 =	
18	2 x 7 =		40	4 x 8 =	
19	1 x 9 =		41	4 x 9 =	
20	2 x 9 =		42	3 x 7 =	
21	2 x 5 =		43	3 x 8 =	
22	2 x 6 =		44	3 x 9 =	

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COMMON CORE | **Lesson 1:** Study commutativity to find known facts of 6, 7, 8, and 9.
Date: 7/31/13

engage^{ny}

3.A.8

B

Improvement _____   # Correct _____

Multiply.

1	$5 \times 1 =$		23	$5 \times 7 =$	
2	$5 \times 2 =$		24	$2 \times 5 =$	
3	$5 \times 3 =$		25	$2 \times 6 =$	
4	$3 \times 1 =$		26	$2 \times 7 =$	
5	$3 \times 2 =$		27	$3 \times 5 =$	
6	$3 \times 3 =$		28	$3 \times 6 =$	
7	$1 \times 7 =$		29	$3 \times 7 =$	
8	$2 \times 7 =$		30	$4 \times 5 =$	
9	$1 \times 9 =$		31	$4 \times 6 =$	
10	$2 \times 9 =$		32	$4 \times 7 =$	
11	$2 \times 1 =$		33	$5 \times 7 =$	
12	$2 \times 2 =$		34	$5 \times 8 =$	
13	$2 \times 3 =$		35	$5 \times 9 =$	
14	$4 \times 1 =$		36	$2 \times 7 =$	
15	$4 \times 2 =$		37	$2 \times 8 =$	
16	$4 \times 3 =$		38	$2 \times 9 =$	
17	$1 \times 6 =$		39	$3 \times 7 =$	
18	$2 \times 6 =$		40	$3 \times 8 =$	
19	$1 \times 8 =$		41	$3 \times 9 =$	
20	$2 \times 8 =$		42	$4 \times 7 =$	
21	$5 \times 5 =$		43	$4 \times 8 =$	
22	$5 \times 6 =$		44	$4 \times 9 =$	

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Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9.
Date: 7/31/13

engage^ny   **3.A.9**

2

A

Correct _____

Multiply.

1	2 x 2 =		23	5 x 6 =	
2	2 x 3 =		24	6 x 5 =	
3	3 x 2 =		25	5 x 7 =	
4	2 x 4 =		26	7 x 5 =	
5	4 x 2 =		27	5 x 8 =	
6	2 x 5 =		28	8 x 5 =	
7	5 x 2 =		29	5 x 9 =	
8	2 x 6 =		30	9 x 5 =	
9	6 x 2 =		31	5 x 10 =	
10	2 x 7 =		32	10 x 5 =	
11	7 x 2 =		33	3 x 3 =	
12	2 x 8 =		34	3 x 4 =	
13	8 x 2 =		35	4 x 3 =	
14	2 x 9 =		36	3 x 6 =	
15	9 x 2 =		37	6 x 3 =	
16	2 x 10 =		38	3 x 7 =	
17	10 x 2 =		39	7 x 3 =	
18	5 x 3 =		40	3 x 8 =	
19	3 x 5 =		41	8 x 3 =	
20	5 x 4 =		42	3 x 9 =	
21	4 x 5 =		43	9 x 3 =	
22	5 x 5 =		44	4 x 4 =	

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COMMON CORE

Lesson 2: Apply the distributive and commutative properties to relate multiplication facts 5 x *n* + *n* to 6 x *n* and *n* x 6 where *n* is the size of the unit.

Date: 7/31/13

engage^{ny}

3.A.19

3

B

Improvement _____   # Correct _____

Multiply.

1	5 x 2 =		23	2 x 6 =	
2	2 x 5 =		24	6 x 2 =	
3	5 x 3 =		25	2 x 7 =	
4	3 x 5 =		26	7 x 2 =	
5	5 x 4 =		27	2 x 8 =	
6	4 x 5 =		28	8 x 2 =	
7	5 x 5 =		29	2 x 9 =	
8	5 x 6 =		30	9 x 2 =	
9	6 x 5 =		31	2 x 10 =	
10	5 x 7 =		32	10 x 2 =	
11	7 x 5 =		33	3 x 3 =	
12	5 x 8 =		34	3 x 4 =	
13	8 x 5 =		35	4 x 3 =	
14	5 x 9 =		36	3 x 6 =	
15	9 x 5 =		37	6 x 3 =	
16	5 x 10 =		38	3 x 7 =	
17	10 x 5 =		39	7 x 3 =	
18	2 x 2 =		40	3 x 8 =	
19	2 x 3 =		41	8 x 3 =	
20	3 x 2 =		42	3 x 9 =	
21	2 x 4 =		43	9 x 3 =	
22	4 x 2 =		44	3 x 3 =	

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engage^ny   3.A.20

4

A

Correct _____

Multiply or divide.

1	2 x 8 =		23	__ x 8 = 80	
2	3 x 8 =		24	__ x 8 = 32	
3	4 x 8 =		25	__ x 8 = 24	
4	5 x 8 =		26	80 ÷ 8 =	
5	1 x 8 =		27	40 ÷ 8 =	
6	16 ÷ 8 =		28	8 ÷ 1 =	
7	24 ÷ 8 =		29	16 ÷ 8 =	
8	40 ÷ 8 =		30	24 ÷ 8 =	
9	8 ÷ 1 =		31	__ x 8 = 48	
10	32 ÷ 8 =		32	__ x 8 = 56	
11	6 x 8 =		33	__ x 8 = 72	
12	7 x 8 =		34	__ x 8 = 64	
13	8 x 8 =		35	56 ÷ 8 =	
14	9 x 8 =		36	72 ÷ 8 =	
15	10 x 8 =		37	48 ÷ 8 =	
16	64 ÷ 8 =		38	64 ÷ 8 =	
17	56 ÷ 8 =		39	11 x 8 =	
18	72 ÷ 8 =		40	88 ÷ 8 =	
19	48 ÷ 8 =		41	12 x 8 =	
20	80 ÷ 8 =		42	96 ÷ 8 =	
21	__ x 8 = 40		43	14 x 8 =	
22	__ x 8 = 16		44	112 ÷ 8 =	

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11

B

Multiply or divide.

Improvement _____   # Correct _____

1	1 x 8 =		23	___ x 8 = 48	
2	2 x 8 =		24	___ x 8 = 80	
3	3 x 8 =		25	___ x 8 = 24	
4	4 x 8 =		26	16 ÷ 8 =	
5	5 x 8 =		27	8 ÷ 1 =	
6	24 ÷ 8 =		28	80 ÷ 8 =	
7	16 ÷ 8 =		29	40 ÷ 8 =	
8	32 ÷ 8 =		30	24 ÷ 8 =	
9	8 ÷ 1 =		31	___ x 8 = 64	
10	40 ÷ 8 =		32	___ x 8 = 32	
11	10 x 8 =		33	___ x 8 = 72	
12	6 x 8 =		34	___ x 8 = 56	
13	7 x 8 =		35	64 ÷ 8 =	
14	8 x 8 =		36	72 ÷ 8 =	
15	9 x 8 =		37	48 ÷ 8 =	
16	56 ÷ 8 =		38	56 ÷ 8 =	
17	48 ÷ 8 =		39	11 x 8 =	
18	64 ÷ 8 =		40	88 ÷ 8 =	
19	80 ÷ 8 =		41	12 x 8 =	
20	72 ÷ 8 =		42	96 ÷ 8 =	
21	___ x 8 = 16		43	13 x 8 =	
22	___ x 8 = 40		44	104 ÷ 8 =	

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A

Multiply or divide.

Correct _____

1	2 x 9 =		23	__ x 9 = 90	
2	3 x 9 =		24	__ x 9 = 18	
3	4 x 9 =		25	__ x 9 = 27	
4	5 x 9 =		26	90 ÷ 9 =	
5	1 x 9 =		27	45 ÷ 9 =	
6	18 ÷ 9 =		28	9 ÷ 9 =	
7	27 ÷ 9 =		29	18 ÷ 9 =	
8	45 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	__ x 9 = 54	
10	36 ÷ 9 =		32	__ x 9 = 63	
11	6 x 9 =		33	__ x 9 = 81	
12	7 x 9 =		34	__ x 9 = 72	
13	8 x 9 =		35	63 ÷ 9 =	
14	9 x 9 =		36	81 ÷ 9 =	
15	10 x 9 =		37	54 ÷ 9 =	
16	72 ÷ 9 =		38	72 ÷ 9 =	
17	63 ÷ 9 =		39	11 x 9 =	
18	81 ÷ 9 =		40	99 ÷ 9 =	
19	54 ÷ 9 =		41	12 x 9 =	
20	90 ÷ 9 =		42	108 ÷ 9 =	
21	__ x 9 = 45		43	14 x 9 =	
22	__ x 9 = 9		44	126 ÷ 9 =	

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COMMON CORE

Lesson 16: Reason about and explain arithmetic patterns using units of 0 and 1 as they relate to multiplication and division.

Date: 7/31/13

engage^{ny}

3.E.8

15

B

Multiply or divide.

Improvement _____   # Correct _____

1	$1 \times 9 =$		23	___ $\times 9 = 18$	
2	$2 \times 9 =$		24	___ $\times 9 = 90$	
3	$3 \times 9 =$		25	___ $\times 9 = 27$	
4	$4 \times 9 =$		26	$18 \div 9 =$	
5	$5 \times 9 =$		27	$9 \div 9 =$	
6	$27 \div 9 =$		28	$90 \div 9 =$	
7	$18 \div 9 =$		29	$45 \div 9 =$	
8	$36 \div 9 =$		30	$27 \div 9 =$	
9	$9 \div 9 =$		31	___ $\times 9 = 27$	
10	$45 \div 9 =$		32	___ $\times 9 = 36$	
11	$10 \times 9 =$		33	___ $\times 9 = 81$	
12	$6 \times 9 =$		34	___ $\times 9 = 63$	
13	$7 \times 9 =$		35	$72 \div 9 =$	
14	$8 \times 9 =$		36	$81 \div 9 =$	
15	$9 \times 9 =$		37	$54 \div 9 =$	
16	$63 \div 9 =$		38	$63 \div 9 =$	
17	$54 \div 9 =$		39	$11 \times 9 =$	
18	$72 \div 9 =$		40	$99 \div 9 =$	
19	$90 \div 9 =$		41	$12 \times 9 =$	
20	$81 \div 9 =$		42	$108 \div 9 =$	
21	___ $\times 9 = 9$		43	$13 \times 9 =$	
22	___ $\times 9 = 45$		44	$117 \div 9 =$	

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Lesson 16: Reason about and explain arithmetic patterns using units of 0 and 1
as they relate to multiplication and division.

Date: 7/31/13

engage^{ny}

3.E.9

A

Complete the number sentence.

Correct _____

1	___ x 1 = 2		23	9 ÷ ___ = 9	
2	___ x 1 = 3		24	8 x ___ = 8	
3	___ x 1 = 4		25	___ x 1 = 1	
4	___ x 1 = 9		26	0 ÷ 3 = ___	
5	8 x ___ = 0		27	___ x 1 = 7	
6	9 x ___ = 0		28	6 x ___ = 0	
7	4 x ___ = 0		29	4 x ___ = 4	
8	5 x ___ = 5		30	0 ÷ 8 = ___	
9	6 x ___ = 6		31	0 x ___ = 0	
10	7 x ___ = 7		32	1 ÷ 1 = ___	
11	3 x ___ = 3		33	___ x 1 = 24	
12	0 ÷ 1 = ___		34	17 x ___ = 0	
13	0 ÷ 2 = ___		35	32 x ___ = 32	
14	0 ÷ 3 = ___		36	0 ÷ 19 = ___	
15	0 ÷ 6 = ___		37	46 x ___ = 0	
16	1 x ___ = 1		38	0 ÷ 51 = ___	
17	4 ÷ ___ = 4		39	64 x ___ = 64	
18	5 ÷ ___ = 5		40	___ x 1 = 79	
19	6 ÷ ___ = 6		41	0 ÷ 82 = ___	
20	8 ÷ ___ = 8		42	___ x 1 = 96	
21	___ x 1 = 5		43	27 x ___ = 27	
22	3 x ___ = 0		44	43 x ___ = 0	

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COMMON CORE

Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions.

Date: 7/31/13

engage^{ny}

3.E.30

17

B

Improvement _____   # Correct _____

Complete the number sentence.

1	__ x 1 = 3		23	8 ÷ __ = 8	
2	__ x 1 = 4		24	7 x __ = 7	
3	__ x 1 = 5		25	__ x 1 = 1	
4	__ x 1 = 8		26	0 ÷ 5 = __	
5	7 x __ = 0		27	__ x 1 = 9	
6	8 x __ = 0		28	5 x __ = 0	
7	3 x __ = 0		29	9 x __ = 9	
8	4 x __ = 4		30	0 ÷ 6 = __	
9	5 x __ = 5		31	1 ÷ 1 = __	
10	6 x __ = 6		32	0 x __ = 0	
11	2 x __ = 2		33	__ x 1 = 34	
12	0 ÷ 2 = __		34	16 x __ = 0	
13	0 ÷ 3 = __		35	31 x __ = 31	
14	0 ÷ 4 = __		36	0 ÷ 18 = __	
15	0 ÷ 7 = __		37	45 x __ = 0	
16	1 x __ = 1		38	0 ÷ 52 = __	
17	3 ÷ __ = 3		39	63 x __ = 63	
18	4 ÷ __ = 4		40	__ x 1 = 78	
19	5 ÷ __ = 5		41	0 ÷ 81 = __	
20	7 ÷ __ = 7		42	__ x 1 = 97	
21	__ x 1 = 6		43	26 x __ = 26	
22	4 x __ = 0		44	42 x __ = 0	

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Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions.
Date: 7/31/13

engage^ny 3.E.31

18

3.F.27

A

Correct _____

Multiply.

1	2 x 3 =		23	8 x 40 =	
2	2 x 30 =		24	80 x 4 =	
3	20 x 3 =		25	9 x 6 =	
4	2 x 2 =		26	90 x 6 =	
5	2 x 20 =		27	2 x 5 =	
6	20 x 2 =		28	2 x 50 =	
7	4 x 2 =		29	3 x 90 =	
8	4 x 20 =		30	40 x 7 =	
9	40 x 2 =		31	5 x 40 =	
10	5 x 3 =		32	6 x 60 =	
11	50 x 3 =		33	70 x 6 =	
12	3 x 50 =		34	8 x 70 =	
13	4 x 4 =		35	80 x 6 =	
14	40 x 4 =		36	9 x 70 =	
15	4 x 40 =		37	50 x 6 =	
16	6 x 3 =		38	8 x 80 =	
17	6 x 30 =		39	9 x 80 =	
18	60 x 3 =		40	60 x 8 =	
19	7 x 5 =		41	70 x 7 =	
20	70 x 5 =		42	5 x 80 =	
21	7 x 50 =		43	60 x 9 =	
22	8 x 4 =		44	9 x 90 =	

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B

Multiply.

Improvement _____   # Correct _____

1	4 x 2 =		23	9 x 40 =	
2	4 x 20 =		24	90 x 4 =	
3	40 x 2 =		25	8 x 6 =	
4	3 x 3 =		26	80 x 6 =	
5	3 x 30 =		27	5 x 2 =	
6	30 x 3 =		28	5 x 20 =	
7	3 x 2 =		29	3 x 80 =	
8	3 x 20 =		30	40 x 8 =	
9	30 x 2 =		31	4 x 50 =	
10	5 x 5 =		32	8 x 80 =	
11	50 x 5 =		33	90 x 6 =	
12	5 x 50 =		34	6 x 70 =	
13	4 x 3 =		35	60 x 6 =	
14	40 x 3 =		36	7 x 70 =	
15	4 x 30 =		37	60 x 5 =	
16	7 x 3 =		38	6 x 80 =	
17	7 x 30 =		39	7 x 80 =	
18	70 x 3 =		40	80 x 6 =	
19	6 x 4 =		41	90 x 7 =	
20	60 x 4 =		42	8 x 50 =	
21	6 x 40 =		43	80 x 9 =	
22	9 x 4 =		44	7 x 90 =	

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COMMON CORE	**Lesson 21:**	Solve two-step word problems involving multiplying single-digit	engage^ny	**3.F.28**
	Date:	factors and multiples of 10.		
		7/31/13		

A

 # Correct _____

Multiply.

1	1 x 6 =		23	10 x 6 =	
2	6 x 1 =		24	9 x 6 =	
3	2 x 6 =		25	4 x 6 =	
4	6 x 2 =		26	8 x 6 =	
5	3 x 6 =		27	6 x 3 =	
6	6 x 3 =		28	7 x 6 =	
7	4 x 6 =		29	6 x 6 =	
8	6 x 4 =		30	6 x 10 =	
9	5 x 6 =		31	6 x 5 =	
10	6 x 5 =		32	6 x 4 =	
11	6 x 6 =		33	6 x 1 =	
12	7 x 6 =		34	6 x 9 =	
13	6 x 7 =		35	6 x 6 =	
14	8 x 6 =		36	6 x 3 =	
15	6 x 8 =		37	6 x 2 =	
16	9 x 6 =		38	6 x 7 =	
17	6 x 9 =		39	6 x 8 =	
18	10 x 6 =		40	11 x 6 =	
19	6 x 10 =		41	6 x 11 =	
20	6 x 3 =		42	12 x 6 =	
21	1 x 6 =		43	6 x 12 =	
22	2 x 6 =		44	13 x 6 =	

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COMMON CORE

Lesson 3: Specify and Partition a Whole Into Equal Parts, Identifying and Counting Unit Fractions by Drawing Pictorial Area Models

Date: 1/31/13

engage^ny   5.A.25

1

B

Improvement _____ # Correct _____

Multiply.

1	6 x 1 =		23	9 x 6 =	
2	1 x 6 =		24	3 x 6 =	
3	6 x 2 =		25	8 x 6 =	
4	2 x 6 =		26	4 x 6 =	
5	6 x 3 =		27	7 x 6 =	
6	3 x 6 =		28	5 x 6 =	
7	6 x 4 =		29	6 x 6 =	
8	4 x 6 =		30	6 x 5 =	
9	6 x 5 =		31	6 x 10 =	
10	5 x 6 =		32	6 x 1 =	
11	6 x 6 =		33	6 x 6 =	
12	6 x 7 =		34	6 x 4 =	
13	7 x 6 =		35	6 x 9 =	
14	6 x 8 =		36	6 x 2 =	
15	8 x 6 =		37	6 x 7 =	
16	6 x 9 =		38	6 x 3 =	
17	9 x 6 =		39	6 x 8 =	
18	6 x 10 =		40	11 x 6 =	
19	10 x 6 =		41	6 x 11 =	
20	1 x 6 =		42	12 x 6 =	
21	10 x 6 =		43	6 x 12 =	
22	2 x 6 =		44	13 x 6 =	

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COMMON CORE

Lesson 3: Specify and Partition a Whole Into Equal Parts, Identifying and Counting Unit Fractions by Drawing Pictorial Area Models

Date: 1/31/13

2

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5.A.26

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A

Correct _____

Multiply or divide.

1	2 x 6 =		23	___ x 6 = 60	
2	3 x 6 =		24	___ x 6 =12	
3	4 x 6 =		25	___ x 6 = 18	
4	5 x 6 =		26	60 ÷ 6 =	
5	1 x 6 =		27	30 ÷ 6 =	
6	12 ÷ 6 =		28	6 ÷ 6 =	
7	18 ÷ 6 =		29	12 ÷ 6 =	
8	30 ÷ 6 =		30	18 ÷ 6 =	
9	6 ÷ 6 =		31	___ x 6 = 36	
10	24 ÷ 6 =		32	___ x 6 = 42	
11	6 x 6 =		33	___ x 6 = 54	
12	7 x 6 =		34	___ x 6 = 48	
13	8 x 6 =		35	42 ÷ 6 =	
14	9 x 6 =		36	54 ÷ 6 =	
15	10 x 6 =		37	36 ÷ 6 =	
16	48 ÷ 6 =		38	48 ÷ 6 =	
17	42 ÷ 6 =		39	11 x 6 =	
18	54 ÷ 6 =		40	66 ÷ 6 =	
19	36 ÷ 6 =		41	12 x 6 =	
20	60 ÷ 6 =		42	72 ÷ 6 =	
21	___ x 6 = 30		43	14 x 6 =	
22	___ x6 = 6		44	84 ÷ 6 =	

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Lesson 4:   Explore: Represent and Identify Fractional Parts of Different Wholes
Date: 2/2/13

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5.A.35

3

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B

Multiply or divide.

Improvement _____   # Correct _____

1	1 x 6 =		23	__ x 6 = 12	
2	2 x 6 =		24	__ x 6 = 60	
3	3 x 6 =		25	__ x 6 = 18	
4	4 x 6 =		26	12 ÷ 6 =	
5	5 x 6 =		27	6 ÷ 6 =	
6	18 ÷ 6 =		28	60 ÷ 6 =	
7	12 ÷ 6 =		29	30 ÷ 6 =	
8	24 ÷ 6 =		30	18 ÷ 6 =	
9	6 ÷ 6 =		31	__ x 6 = 18	
10	30 ÷ 6 =		32	__ x 6 = 24	
11	10 x 6 =		33	__ x 6 = 54	
12	6 x 6 =		34	__ x 6 = 42	
13	7 x 6 =		35	48 ÷ 6 =	
14	8 x 6 =		36	54 ÷ 6 =	
15	9 x 6 =		37	36 ÷ 6 =	
16	42 ÷ 6 =		38	42 ÷ 6 =	
17	36 ÷ 6 =		39	11 x 6 =	
18	48 ÷ 6 =		40	66 ÷ 6 =	
19	60 ÷ 6 =		41	12 x 6 =	
20	54 ÷ 6 =		42	72 ÷ 6 =	
21	__ x 6 = 6		43	13 x 6 =	
22	__ x 6 = 30		44	78 ÷ 6 =	

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A

Correct _____

Multiply.

1	1 x 7 =		23	10 x 7 =	
2	7 x 1 =		24	9 x 7 =	
3	2 x 7 =		25	4 x 7 =	
4	7 x 2 =		26	8 x 7 =	
5	3 x 7 =		27	7 x 3 =	
6	7 x 3 =		28	7 x 7 =	
7	4 x 7 =		29	6 x 7 =	
8	7 x 4 =		30	7 x 10 =	
9	5 x 7 =		31	7 x 5 =	
10	7 x 5 =		32	7 x 6 =	
11	6 x 7 =		33	7 x 1 =	
12	7 x 6 =		34	7 x 9 =	
13	7 x 7 =		35	7 x 4 =	
14	8 x 7 =		36	7 x 3 =	
15	7 x 8 =		37	7 x 2 =	
16	9 x 7 =		38	7 x 7 =	
17	7 x 9 =		39	7 x 8 =	
18	10 x 7 =		40	11 x 7 =	
19	7 x 10 =		41	7 x 11 =	
20	7 x 3 =		42	12 x 7 =	
21	1 x 7 =		43	7 x 12 =	
22	2 x 7 =		44	13 x 7 =	

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B

Improvement _____   # Correct _____

Multiply.

1	7 x 1 =		23	9 x 7 =	
2	1 x 7 =		24	3 x 7 =	
3	7 x 2 =		25	8 x 7 =	
4	2 x 7 =		26	4 x 7 =	
5	7 x 3 =		27	7 x 7 =	
6	3 x 7 =		28	5 x 7 =	
7	7 x 4 =		29	6 x 7 =	
8	4 x 7 =		30	7 x 5 =	
9	7 x 5 =		31	7 x 10 =	
10	5 x 7 =		32	7 x 1 =	
11	7 x 6 =		33	7 x 6 =	
12	6 x 7 =		34	7 x 4 =	
13	7 x 7 =		35	7 x 9 =	
14	7 x 8 =		36	7 x 2 =	
15	8 x 7 =		37	7 x 7 =	
16	7 x 9 =		38	7 x 3 =	
17	9 x 7 =		39	7 x 8 =	
18	7 x 10 =		40	11 x 7 =	
19	10 x 7 =		41	7 x 11 =	
20	1 x 7 =		42	12 x 7 =	
21	10 x 7 =		43	7 x 12 =	
22	2 x 7 =		44	13 x 7 =	

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A

Correct _____

Multiply or divide.

1	2 x 7 =		23	__ x 7 = 70	
2	3 x 7 =		24	__ x 7 = 14	
3	4 x 7 =		25	__ x 7 = 21	
4	5 x 7 =		26	70 ÷ 7 =	
5	1 x 7 =		27	35 ÷ 7 =	
6	14 ÷ 7 =		28	7 ÷ 7 =	
7	21 ÷ 7 =		29	14 ÷ 7 =	
8	35 ÷ 7 =		30	21 ÷ 7 =	
9	7 ÷ 7 =		31	__ x 7 = 42	
10	28 ÷ 7 =		32	__ x 7 = 49	
11	6 x 7 =		33	__ x 7 = 63	
12	7 x 7 =		34	__ x 7 = 56	
13	8 x 7 =		35	49 ÷ 7 =	
14	9 x 7 =		36	63 ÷ 7 =	
15	10 x 7 =		37	42 ÷ 7 =	
16	56 ÷ 7 =		38	56 ÷ 7 =	
17	49 ÷ 7 =		39	11 x 7 =	
18	63 ÷ 7 =		40	77 ÷ 7 =	
19	42 ÷ 7 =		41	12 x 7 =	
20	70 ÷ 7 =		42	84 ÷ 7 =	
21	__ x 7 = 35		43	14 x 7 =	
22	__ x 7 = 7		44	98 ÷ 7 =	

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COMMON CORE | Lesson 7: | **Identify and Represent** Shaded and Non-Shaded Parts of One Whole as Fractions | engage**ny** | 5.B.28

Date: 1/31/13

7

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B

Multiply or divide.

Improvement _____   # Correct _____

1	1 x 7 =		23	__ x 7 = 14	
2	2 x 7 =		24	__ x 7 = 70	
3	3 x 7 =		25	__ x 7 = 21	
4	4 x 7 =		26	14 ÷ 7 =	
5	5 x 7 =		27	7 ÷ 7 =	
6	21 ÷ 7 =		28	70 ÷ 7 =	
7	14 ÷ 7 =		29	35 ÷ 7 =	
8	28 ÷ 7 =		30	21 ÷ 7 =	
9	7 ÷ 7 =		31	__ x 7 = 21	
10	35 ÷ 7 =		32	__ x 7 = 28	
11	10 x 7 =		33	__ x 7 = 63	
12	6 x 7 =		34	__ x 7 = 49	
13	7 x 7 =		35	56 ÷ 7 =	
14	8 x 7 =		36	63 ÷ 7 =	
15	9 x 7 =		37	42 ÷ 7 =	
16	49 ÷ 7 =		38	49 ÷ 7 =	
17	42 ÷ 7 =		39	11 x 7 =	
18	56 ÷ 7 =		40	77 ÷ 7 =	
19	70 ÷ 7 =		41	12 x 7 =	
20	63 ÷ 7 =		42	84 ÷ 7 =	
21	__ x 7 = 7		43	13 x 7 =	
22	__ x 7 = 35		44	91 ÷ 7 =	

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Lesson 7: **Identify and Represent** Shaded and Non-Shaded Parts of One Whole as Fractions
Date: 1/31/13

engage^{ny}

5.B.29

8

A

Correct _____

Multiply.

1	8 x 1 =		23	9 x 8 =	
2	1 x 8 =		24	3 x 8 =	
3	8 x 2 =		25	8 x 8 =	
4	2 x 8 =		26	4 x 8 =	
5	8 x 3 =		27	7 x 8 =	
6	3 x 8 =		28	5 x 8 =	
7	8 x 4 =		29	6 x 8 =	
8	4 x 8 =		30	8 x 5 =	
9	8 x 5 =		31	8 x 10 =	
10	5 x 8 =		32	8 x 1 =	
11	8 x 6 =		33	8 x 6 =	
12	6 x 8 =		34	8 x 4 =	
13	8 x 7 =		35	8 x 9 =	
14	7 x 8 =		36	8 x 2 =	
15	8 x 8 =		37	8 x 7 =	
16	8 x 9 =		38	8 x 3 =	
17	9 x 8 =		39	8 x 8 =	
18	8 x 10 =		40	11 x 8 =	
19	10 x 8 =		41	8 x 11 =	
20	1 x 8 =		42	12 x 8 =	
21	10 x 8 =		43	8 x 12 =	
22	2 x 8 =		44	13 x 8 =	

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Lesson 9: Build and Write Fractions Greater than One Whole Using Unit
Fractions

Date: 1/31/13

11

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B   Improvement _____   # Correct _____

Multiply.

1	1 x 8 =			23	10 x 8 =	
2	8 x 1 =			24	9 x 8 =	
3	2 x 8 =			25	4 x 8 =	
4	8 x 2 =			26	8 x 8 =	
5	3 x 8 =			27	8 x 3 =	
6	8 x 3 =			28	7 x 8 =	
7	4 x 8 =			29	6 x 8 =	
8	8 x 4 =			30	8 x 10 =	
9	5 x 8 =			31	8 x 5 =	
10	8 x 5 =			32	8 x 6 =	
11	6 x 8 =			33	8 x 1 =	
12	8 x 6 =			34	8 x 9 =	
13	7 x 8 =			35	8 x 4 =	
14	8 x 7 =			36	8 x 3 =	
15	8 x 8 =			37	8 x 2 =	
16	9 x 8 =			38	8 x 7 =	
17	8 x 9 =			39	8 x 8 =	
18	10 x 8 =			40	11 x 8 =	
19	8 x 10 =			41	8 x 11 =	
20	8 x 3 =			42	12 x 8 =	
21	1 x 8 =			43	8 x 12 =	
22	2 x 8 =			44	13 x 8 =	

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A   # Correct _____

Multiply or divide.

1	2 x 8 =			23	__ x 8 = 80	
2	3 x 8 =			24	__ x 8 = 16	
3	4 x 8 =			25	__ x 8 = 24	
4	5 x 8 =			26	80 ÷ 8 =	
5	1 x 8 =			27	40 ÷ 8 =	
6	16 ÷ 8 =			28	8 ÷ 8 =	
7	24 ÷ 8 =			29	16 ÷ 8 =	
8	40 ÷ 8 =			30	24 ÷ 8 =	
9	8 ÷ 8 =			31	__ x 8 = 48	
10	32 ÷ 8 =			32	__ x 8 = 56	
11	6 x 8 =			33	__ x 8 = 72	
12	7 x 8 =			34	__ x 8 = 64	
13	8 x 8 =			35	56 ÷ 8 =	
14	9 x 8 =			36	72 ÷ 8 =	
15	10 x 8 =			37	48 ÷ 8 =	
16	64 ÷ 8 =			38	64 ÷ 8 =	
17	56 ÷ 8 =			39	11 x 8 =	
18	72 ÷ 8 =			40	88 ÷ 8 =	
19	48 ÷ 8 =			41	12 x 8 =	
20	80 ÷ 8 =			42	96 ÷ 8 =	
21	__ x 8 = 40			43	14 x 8 =	
22	__ x 8 = 1			44	112 ÷ 8 =	

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B   Improvement _____   # Correct _____

Multiply or divide.

1	1 x 8 =		23	__ x 8 = 16	
2	2 x 8 =		24	__ x 8 = 80	
3	3 x 8 =		25	__ x 8 = 24	
4	4 x 8 =		26	16 ÷ 8 =	
5	5 x 8 =		27	8 ÷ 8 =	
6	24 ÷ 8 =		28	80 ÷ 8 =	
7	16 ÷ 8 =		29	40 ÷ 8 =	
8	32 ÷ 8 =		30	24 ÷ 8 =	
9	8 ÷ 8 =		31	__ x 8 = 24	
10	40 ÷ 8 =		32	__ x 8 = 32	
11	10 x 8 =		33	__ x 8 = 72	
12	6 x 8 =		34	__ x 8 = 56	
13	7 x 8 =		35	64 ÷ 8 =	
14	8 x 8 =		36	72 ÷8 =	
15	9 x 8 =		37	48 ÷ 8 =	
16	56 ÷ 8 =		38	56 ÷ 8 =	
17	48 ÷ 8 =		39	11 x 8 =	
18	64 ÷ 8 =		40	88 ÷ 8 =	
19	80 ÷ 8 =		41	12 x 8 =	
20	72 ÷8 =		42	96 ÷ 8 =	
21	__ x 8 = 8		43	13 x 8 =	
22	__ x 8 = 40		44	104 ÷ 8 =	

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A

Multiply.   # Correct _____

1	9 x 1 =		23	9 x 9 =	
2	1 x 9 =		24	3 x 9 =	
3	9 x 2 =		25	8 x 9 =	
4	2 x 9 =		26	4 x 9 =	
5	9 x 3 =		27	7 x 9 =	
6	3 x 9 =		28	5 x 9 =	
7	9 x 4 =		29	6 x 9 =	
8	4 x 9 =		30	9 x 5 =	
9	9 x 5 =		31	9 x 10 =	
10	5 x 9 =		32	9 x 1 =	
11	9 x 6 =		33	9 x 6 =	
12	6 x 9 =		34	9 x 4 =	
13	9 x 7 =		35	9 x 9 =	
14	7 x 9 =		36	9 x 2 =	
15	9 x 8 =		37	9 x 7 =	
16	8 x 9 =		38	9 x 3 =	
17	9 x 9 =		39	9 x 8 =	
18	9 x 10 =		40	11 x 9 =	
19	10 x 9 =		41	9 x 11 =	
20	1 x 9 =		42	12 x 9 =	
21	10 x 9 =		43	9 x 12 =	
22	2 x 9 =		44	13 x 9 =	

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B   Improvement _____   # Correct _____

Multiply.

#	Problem		#	Problem	
1	1 x 9 =		23	10 x 9 =	
2	9 x 1 =		24	9 x 9 =	
3	2 x 9 =		25	4 x 9 =	
4	9 x 2 =		26	8 x 9 =	
5	3 x 9 =		27	3 x 9 =	
6	9 x 3 =		28	7 x 9 =	
7	4 x 9 =		29	6 x 9 =	
8	9 x 4 =		30	9 x 10 =	
9	5 x 9 =		31	9 x 5 =	
10	9 x 5 =		32	9 x 6 =	
11	6 x 9 =		33	9 x 1 =	
12	9 x 6 =		34	9 x 9 =	
13	7 x 9 =		35	9 x 4 =	
14	9 x 7 =		36	9 x 3 =	
15	8 x 9 =		37	9 x 2 =	
16	9 x 8 =		38	9 x 7 =	
17	9 x 9 =		39	9 x 8 =	
18	10 x 9 =		40	11 x 9 =	
19	9 x 10 =		41	9 x 11 =	
20	9 x 3 =		42	12 x 9 =	
21	1 x 9 =		43	9 x 12 =	
22	2 x 9 =		44	13 x 9 =	

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A

Multiply or divide.

Correct _____

1	2 x 9 =		23	__ x 9 = 90	
2	3 x 9 =		24	__ x 9 = 18	
3	4 x 9 =		25	__ x 9 = 27	
4	5 x 9 =		26	90 ÷ 9 =	
5	1 x 9 =		27	45 ÷ 9 =	
6	18 ÷ 9 =		28	9 ÷ 9 =	
7	27 ÷ 9 =		29	18 ÷ 9 =	
8	45 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	__ x 9 = 54	
10	36 ÷ 9 =		32	__ x 9 = 63	
11	6 x 9 =		33	__ x 9 = 81	
12	7 x 9 =		34	__ x 9 = 72	
13	8 x 9 =		35	63 ÷ 9 =	
14	9 x 9 =		36	81 ÷ 9 =	
15	10 x 9 =		37	54 ÷ 9 =	
16	72 ÷ 9 =		38	72 ÷ 9 =	
17	63 ÷ 9 =		39	11 x 9 =	
18	81 ÷ 9 =		40	99 ÷ 9 =	
19	54 ÷ 9 =		41	12 x 9 =	
20	90 ÷ 9 =		42	108 ÷ 9 =	
21	__ x 9 = 45		43	14 x 9 =	
22	__ x 9 = 9		44	126 ÷ 9 =	

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COMMON CORE | Lesson 16: | Place Whole Number Fractions and Unit Fractions Between Whole Numbers on the Number Line
Date: | 2/1/13

engage^ny | 5.D.27

17

B

Improvement _____   # Correct _____

Multiply or divide.

1	1 x 9 =		23	__ x 9 = 18	
2	2 x 9 =		24	__ x 9 = 90	
3	3 x 9 =		25	__ x 9 = 27	
4	4 x 9 =		26	18 ÷ 9 =	
5	5 x 9 =		27	9 ÷ 9 =	
6	27 ÷ 9 =		28	90 ÷ 9 =	
7	18 ÷ 9 =		29	45 ÷ 9 =	
8	36 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	__ x 9 = 27	
10	45 ÷ 9 =		32	__ x 9 = 36	
11	10 x 9 =		33	__ x 9 = 81	
12	6 x 9 =		34	__ x 9 = 63	
13	7 x 9 =		35	72 ÷ 9 =	
14	8 x 9 =		36	81 ÷ 9 =	
15	9 x 9 =		37	54 ÷ 9 =	
16	63 ÷ 9 =		38	63 ÷ 9 =	
17	54 ÷ 9 =		39	11 x 9 =	
18	72 ÷ 9 =		40	99 ÷ 9 =	
19	90 ÷ 9 =		41	12 x 9 =	
20	81 ÷ 9 =		42	108 ÷ 9 =	
21	__ x 9 = 9		43	13 x 9 =	
22	__ x 9 = 45		44	117 ÷ 9 =	

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5.D.28

A

Number Correct: _____

Multiply or Divide by 6

1.	$2 \times 6 =$		23.	___ $\times 6 = 60$	
2.	$3 \times 6 =$		24.	___ $\times 6 = 12$	
3.	$4 \times 6 =$		25.	___ $\times 6 = 18$	
4.	$5 \times 6 =$		26.	$60 \div 6 =$	
5.	$1 \times 6 =$		27.	$30 \div 6 =$	
6.	$12 \div 6 =$		28.	$6 \div 6 =$	
7.	$18 \div 6 =$		29.	$12 \div 6 =$	
8.	$30 \div 6 =$		30.	$18 \div 6 =$	
9.	$6 \div 6 =$		31.	___ $\times 6 = 36$	
10.	$24 \div 6 =$		32.	___ $\times 6 = 42$	
11.	$6 \times 6 =$		33.	___ $\times 6 = 54$	
12.	$7 \times 6 =$		34.	___ $\times 6 = 48$	
13.	$8 \times 6 =$		35.	$42 \div 6 =$	
14.	$9 \times 6 =$		36.	$54 \div 6 =$	
15.	$10 \times 6 =$		37.	$36 \div 6 =$	
16.	$48 \div 6 =$		38.	$48 \div 6 =$	
17.	$42 \div 6 =$		39.	$11 \times 6 =$	
18.	$54 \div 6 =$		40.	$66 \div 6 =$	
19.	$36 \div 6 =$		41.	$12 \times 6 =$	
20.	$60 \div 6 =$		42.	$72 \div 6 =$	
21.	___ $\times 6 = 30$		43.	$14 \times 6 =$	
22.	___ $\times 6 = 6$		44.	$84 \div 6 =$	

B

Multiply or Divide by 6

1.	$1 \times 6 =$		23.	___ $\times 6 = 12$	
2.	$2 \times 6 =$		24.	___ $\times 6 = 60$	
3.	$3 \times 6 =$		25.	___ $\times 6 = 18$	
4.	$4 \times 6 =$		26.	$12 \div 6 =$	
5.	$5 \times 6 =$		27.	$6 \div 6 =$	
6.	$18 \div 6 =$		28.	$60 \div 6 =$	
7.	$12 \div 6 =$		29.	$30 \div 6 =$	
8.	$24 \div 6 =$		30.	$18 \div 6 =$	
9.	$6 \div 6 =$		31.	___ $\times 6 = 18$	
10.	$30 \div 6 =$		32.	___ $\times 6 = 24$	
11.	$10 \times 6 =$		33.	___ $\times 6 = 54$	
12.	$6 \times 6 =$		34.	___ $\times 6 = 42$	
13.	$7 \times 6 =$		35.	$48 \div 6 =$	
14.	$8 \times 6 =$		36.	$54 \div 6 =$	
15.	$9 \times 6 =$		37.	$36 \div 6 =$	
16.	$42 \div 6 =$		38.	$42 \div 6 =$	
17.	$36 \div 6 =$		39.	$11 \times 6 =$	
18.	$48 \div 6 =$		40.	$66 \div 6 =$	
19.	$60 \div 6 =$		41.	$12 \times 6 =$	
20.	$54 \div 6 =$		42.	$72 \div 6 =$	
21.	___ $\times 6 = 6$		43.	$13 \times 6 =$	
22.	___ $\times 6 = 30$		44.	$78 \div 6 =$	

A

Solve.

Correct _____

1	2 x 2 =		23	___ x 2 = 20	
2	3 x 2 =		24	___ x 2 = 4	
3	4 x 2 =		25	___ x 2 = 6	
4	5 x 2 =		26	20 ÷ 2 =	
5	1 x 2 =		27	10 ÷ 2 =	
6	4 ÷ 2 =		28	2 ÷ 1 =	
7	6 ÷ 2 =		29	4 ÷ 2 =	
8	10 ÷ 2 =		30	6 ÷ 2 =	
9	2 ÷ 1 =		31	___ x 2 = 12	
10	8 ÷ 2 =		32	___ x 2 = 14	
11	6 x 2 =		33	___ x 2 = 18	
12	7 x 2 =		34	___ x 2 = 16	
13	8 x 2 =		35	14 ÷ 2 =	
14	9 x 2 =		36	18 ÷ 2 =	
15	10 x 2 =		37	12 ÷ 2 =	
16	16 ÷ 2 =		38	16 ÷ 2 =	
17	14 ÷ 2 =		39	11 x 2 =	
18	18 ÷ 2 =		40	22 ÷ 2 =	
19	12 ÷ 2 =		41	12 x 2 =	
20	20 ÷ 2 =		42	24 ÷ 2 =	
21	___ x 2 = 10		43	14 x 2 =	
22	___ x 2 = 12		44	28 ÷ 2 =	

Lesson 20: Construct rectangles with a given perimeter using unit squares and determine their areas.

Date: 1/29/14

14

engage^{ny} 7.D.31

B

Improvement _____   # Correct _____

Solve.

1	1 x 2 =		23	___ x 2 = 4	
2	2 x 2 =		24	___ x 2 = 20	
3	3 x 2 =		25	___ x 2 = 6	
4	4 x 2 =		26	4 ÷ 2 =	
5	5 x 2 =		27	2 ÷ 1 =	
6	6 ÷ 2 =		28	20 ÷ 2 =	
7	4 ÷ 2 =		29	10 ÷ 2 =	
8	8 ÷ 2 =		30	6 ÷ 2 =	
9	2 ÷ 1 =		31	___ x 2 = 12	
10	10 ÷ 2 =		32	___ x 2 = 16	
11	10 x 2 =		33	___ x 2 = 18	
12	6 x 2 =		34	___ x 2 = 14	
13	7 x 2 =		35	16 ÷ 2 =	
14	8 x 2 =		36	18 ÷ 2 =	
15	9 x 2 =		37	12 ÷ 2 =	
16	14 ÷ 2 =		38	14 ÷ 2 =	
17	12 ÷ 2 =		39	11 x 2 =	
18	16 ÷ 2 =		40	22 ÷ 2 =	
19	20 ÷ 2 =		41	12 x 2 =	
20	18 ÷ 2 =		42	24 ÷ 2 =	
21	___ x 2 = 12		43	13 x 2 =	
22	___ x 2 = 10		44	26 ÷ 2 =	

Lesson 20:   Construct rectangles with a given perimeter using unit squares and determine their areas.
Date: 1/29/14

15

engage^ny   **7.D.32**

A

Correct _____

Solve.

1	2 x 3 =		23	__ x 3 = 10	
2	3 x 3 =		24	__ x 3 = 6	
3	4 x 3 =		25	__ x 3 = 9	
4	5 x 3 =		26	30 ÷ 3 =	
5	1 x 3 =		27	15 ÷ 3 =	
6	6 ÷ 3 =		28	3 ÷ 3 =	
7	9 ÷ 3 =		29	6 ÷ 3 =	
8	15 ÷ 3 =		30	9 ÷ 3 =	
9	3 ÷ 3 =		31	__ x 3 = 18	
10	12 ÷ 3 =		32	__ x 3 = 21	
11	6 x 3 =		33	__ x 3 = 27	
12	7 x 3 =		34	__ x 3 = 24	
13	8 x 3 =		35	21 ÷ 3 =	
14	9 x 3 =		36	27 ÷ 3 =	
15	10 x 3 =		37	18 ÷ 3 =	
16	24 ÷ 3 =		38	24 ÷ 3 =	
17	21 ÷ 3 =		39	11 x 3 =	
18	27 ÷ 3 =		40	33 ÷ 3 =	
19	18 ÷ 3 =		41	12 x 3 =	
20	30 ÷ 3 =		42	36 ÷ 3 =	
21	__ x 3 = 15		43	13 x 3 =	
22	__ x 3 = 3		44	39 ÷ 3 =	

COMMON CORE | **Lesson 21:** Construct rectangles with a given perimeter using unite square and determine their areas.

Date: 1/29/14

engage^ny   7.D.43

16

B

Solve.

Improvement _____   # Correct _____

1	1 x 3 =		23	__ x 3 = 6	
2	2 x 3 =		24	__ x 3 = 30	
3	3 x 3 =		25	__ x 3 = 9	
4	4 x 3 =		26	6 ÷ 3 =	
5	5 x 3 =		27	3 ÷ 3 =	
6	9 ÷ 3 =		28	30 ÷ 3 =	
7	6 ÷ 3 =		29	15 ÷ 3 =	
8	12 ÷ 3 =		30	9 ÷ 3 =	
9	3 ÷ 3 =		31	__ x 3 = 18	
10	15 ÷ 3 =		32	__ x 3 = 24	
11	10 x 3 =		33	__ x 3 = 27	
12	6 x 3 =		34	__ x 3 = 21	
13	7 x 3 =		35	24 ÷ 3 =	
14	8 x 3 =		36	27 ÷ 3 =	
15	9 x 3 =		37	18 ÷ 3 =	
16	21 ÷ 3 =		38	21 ÷ 3 =	
17	18 ÷ 3 =		39	11 x 3 =	
18	24 ÷ 3 =		40	33 ÷ 3 =	
19	30 ÷ 3 =		41	12 x 3 =	
20	27 ÷ 3 =		42	36 ÷ 3 =	
21	__ x 3 = 3		43	13 x 3 =	
22	__ x 3 =15		44	39 ÷ 3 =	

Lesson 21: Construct rectangles with a given perimeter using unite square and determine their areas.

Date: 1/29/14

17

engage^ny   7.D.44

A

Multiply or divide.

Correct _____

1	$2 \times 4 =$		23	___ $\times 4 = 40$	
2	$3 \times 4 =$		24	___ $\times 4 = 8$	
3	$4 \times 4 =$		25	___ $\times 4 = 12$	
4	$5 \times 4 =$		26	$40 \div 4 =$	
5	$1 \times 4 =$		27	$20 \div 4 =$	
6	$8 \div 4 =$		28	$4 \div 4 =$	
7	$12 \div 4 =$		29	$8 \div 4 =$	
8	$20 \div 4 =$		30	$12 \div 4 =$	
9	$4 \div 4 =$		31	___ $\times 4 = 24$	
10	$16 \div 4 =$		32	___ $\times 4 = 28$	
11	$6 \times 4 =$		33	___ $\times 4 = 36$	
12	$7 \times 4 =$		34	___ $\times 4 = 32$	
13	$8 \times 4 =$		35	$28 \div 4 =$	
14	$9 \times 4 =$		36	$36 \div 4 =$	
15	$10 \times 4 =$		37	$24 \div 4 =$	
16	$32 \div 4 =$		38	$32 \div 4 =$	
17	$28 \div 4 =$		39	$11 \times 4 =$	
18	$36 \div 4 =$		40	$44 \div 4 =$	
19	$24 \div 4 =$		41	$12 \div 4 =$	
20	$40 \div 4 =$		42	$48 \div 4 =$	
21	___ $\times 4 = 20$		43	$14 \times 4 =$	
22	___ $\times 4 = 4$		44	$56 \div 4 =$	

Multiply.

B

Improvement _____   # Correct _____

Multply or divide.

#			#		
1	1 x 4 =		23	__ x 4 = 8	
2	2 x 4 =		24	__ x 4 = 40	
3	3 x 4 =		25	__ x 4 = 12	
4	4 x 4 =		26	8 ÷ 4 =	
5	5 x 4 =		27	4 ÷ 4 =	
6	12 ÷ 4 =		28	40 ÷ 4 =	
7	8 ÷ 4 =		29	20 ÷ 4 =	
8	16 ÷ 4 =		30	12 ÷ 4 =	
9	4 ÷ 4 =		31	__ x 4 = 12	
10	20 ÷ 4 =		32	__ x 4 = 16	
11	10 x 4 =		33	__ x 4 = 36	
12	6 x 4 =		34	__ x 4 = 28	
13	7 x 4 =		35	32 ÷ 4 =	
14	8 x 4 =		36	36 ÷ 4 =	
15	9 x 4 =		37	24 ÷ 4 =	
16	28 ÷ 4 =		38	28 ÷ 4 =	
17	24 ÷ 4 =		39	11 x 4 =	
18	32 ÷ 4 =		40	44 ÷ 4 =	
19	40 ÷ 4 =		41	12 x 4 =	
20	36 ÷ 4 =		42	48 ÷ 4 =	
21	__ x 4 = 4		43	13 x 4 =	
22	__ x 4 = 20		44	52 ÷ 4 =	

COMMON CORE   **Lesson 22:**   Use a line plot to record the number of rectangles constructed in Lessons 20 and 21.
Date: 1/29/14

engage**ny**   7.D.58

A

Multiply or divide.

Correct _____

1	2 x 5 =		23	__ x 5 = 50	
2	3 x 5 =		24	__ x 5 = 10	
3	4 x 5 =		25	__ x 5 = 15	
4	5 x 5 =		26	50 ÷ 5 =	
5	1 x 5 =		27	25 ÷ 5 =	
6	10 ÷ 5 =		28	5 ÷ 5 =	
7	15 ÷ 5 =		29	10 ÷ 5 =	
8	25 ÷ 5 =		30	15 ÷ 5 =	
9	5 ÷ 5 =		31	__ x 5 = 30	
10	20 ÷ 5 =		32	__ x 5 = 35	
11	6 x 5 =		33	__ x 5 = 45	
12	7 x 5 =		34	__ x 5 = 40	
13	8 x 5 =		35	35 ÷ 5 =	
14	9 x 5 =		36	45 ÷ 5 =	
15	10 x 5 =		37	30 ÷ 5 =	
16	40 ÷ 5 =		38	40 ÷ 5 =	
17	35 ÷ 5 =		39	11 x 5 =	
18	45 ÷ 5 =		40	55 ÷ 5 =	
19	30 ÷ 5 =		41	15 ÷ 5 =	
20	50 ÷ 5 =		42	60 ÷ 5 =	
21	__ x 5 = 25		43	12 x 5 =	
22	__ x 5 = 5		44	70 ÷ 5 =	

COMMON CORE   **Lesson 23:**   Solve a variety of word problems with perimeter.
   Date: 1/29/14

engage^{ny}   7.E.7

B

Improvement _____   # Correct _____

Multiply or divide.

1	1 x 5 =		23	__ x 5 = 10	
2	2 x 5 =		24	__ x 5 = 50	
3	3 x 5 =		25	__ x 5 = 15	
4	4 x 5 =		26	10 ÷ 5 =	
5	5 x 5 =		27	5 ÷ 5 =	
6	15 ÷ 5 =		28	50 ÷ 5 =	
7	10 ÷ 5 =		29	25 ÷ 5 =	
8	20 ÷ 5 =		30	15 ÷ 5 =	
9	5 ÷ 5 =		31	__ x 5 = 15	
10	25 ÷ 5 =		32	__ x 5 = 20	
11	10 x 5 =		33	__ x 5 = 45	
12	6 x 5 =		34	__ x 5 = 35	
13	7 x 5 =		35	40 ÷ 5 =	
14	8 x 5 =		36	45 ÷ 5 =	
15	9 x 5 =		37	30 ÷ 5 =	
16	35 ÷ 5 =		38	35 ÷ 5 =	
17	30 ÷ 5 =		39	11 x 5 =	
18	40 ÷ 5 =		40	55 ÷ 5 =	
19	50 ÷ 5 =		41	12 x 5 =	
20	45 ÷ 5 =		42	60 ÷ 5 =	
21	__ x 5 = 5		43	13 x 5 =	
22	__ x 5 = 25		44	65 ÷ 5 =	

COMMON CORE

Lesson 23: Solve a variety of word problems with perimeter.
Date: 1/29/14

engage^ny   7.E.8

A

Correct _____

Multiply or divide.

1	2 x 6 =		23	___ x 6 = 60	
2	3 x 6 =		24	___ x 6 =12	
3	4 x 6 =		25	___ x 6 = 18	
4	5 x 6 =		26	60 ÷ 6 =	
5	1 x 6 =		27	30 ÷ 6 =	
6	12 ÷ 6 =		28	6 ÷ 6 =	
7	18 ÷ 6 =		29	12 ÷ 6 =	
8	30 ÷ 6 =		30	18 ÷ 6 =	
9	6 ÷ 6 =		31	___ x 6 = 36	
10	24 ÷ 6 =		32	___ x 6 = 42	
11	6 x 6 =		33	___ x 6 = 54	
12	7 x 6 =		34	___ x 6 = 48	
13	8 x 6 =		35	42 ÷ 6 =	
14	9 x 6 =		36	54 ÷ 6 =	
15	10 x 6 =		37	36 ÷ 6 =	
16	48 ÷ 6 =		38	48 ÷ 6 =	
17	42 ÷ 6 =		39	11 x 6 =	
18	54 ÷ 6 =		40	66 ÷ 6 =	
19	36 ÷ 6 =		41	12 x 6 =	
20	60 ÷ 6 =		42	72 ÷ 6 =	
21	___ x 6 = 30		43	14 x 6 =	
22	___ x6 = 6		44	84 ÷ 6 =	

COMMON CORE

Lesson 25: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Date: 1/29/14

engage**ny**

7.E.27

23

B

Multiply or divide.

Improvement _____   # Correct _____

1	1 x 6 =		23	__ x 6 = 12	
2	2 x 6 =		24	__ x 6 = 60	
3	3 x 6 =		25	__ x 6 = 18	
4	4 x 6 =		26	12 ÷ 6 =	
5	5 x 6 =		27	6 ÷ 6 =	
6	18 ÷ 6 =		28	60 ÷ 6 =	
7	12 ÷ 6 =		29	30 ÷ 6 =	
8	24 ÷ 6 =		30	18 ÷ 6 =	
9	6 ÷ 6 =		31	__ x 6 = 18	
10	30 ÷ 6 =		32	__ x 6 = 24	
11	10 x 6 =		33	__ x 6 = 54	
12	6 x 6 =		34	__ x 6 = 42	
13	7 x 6 =		35	48 ÷ 6 =	
14	8 x 6 =		36	54 ÷ 6 =	
15	9 x 6 =		37	36 ÷ 6 =	
16	42 ÷ 6 =		38	42 ÷ 6 =	
17	36 ÷ 6 =		39	11 x 6 =	
18	48 ÷ 6 =		40	66 ÷ 6 =	
19	60 ÷ 6 =		41	12 x 6 =	
20	54 ÷ 6 =		42	72 ÷ 6 =	
21	__ x 6 = 6		43	13 x 6 =	
22	__ x 6 = 30		44	78 ÷ 6 =	

COMMON CORE

Lesson 25: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Date: 1/29/14

engage^ny   **7.E.28**

24

A

Correct _____

Multiply or divide.

1	2 x 7 =		23	___ x 7 = 70	
2	3 x 7 =		24	___ x 7 = 14	
3	4 x 7 =		25	___ x 7 = 21	
4	5 x 7 =		26	70 ÷ 7 =	
5	1 x 7 =		27	35 ÷ 7 =	
6	14 ÷ 7 =		28	7 ÷ 7 =	
7	21 ÷ 7 =		29	14 ÷ 7 =	
8	35 ÷ 7 =		30	21 ÷ 7 =	
9	7 ÷ 7 =		31	___ x 7 = 42	
10	28 ÷ 7 =		32	___ x 7 = 49	
11	6 x 7 =		33	___ x 7 = 63	
12	7 x 7 =		34	___ x 7 = 56	
13	8 x 7 =		35	49 ÷ 7 =	
14	9 x 7 =		36	63 ÷ 7 =	
15	10 x 7 =		37	42 ÷ 7 =	
16	56 ÷ 7 =		38	56 ÷ 7 =	
17	49 ÷ 7 =		39	11 x 7 =	
18	63 ÷ 7 =		40	77 ÷ 7 =	
19	42 ÷ 7 =		41	12 x 7 =	
20	70 ÷ 7 =		42	84 ÷ 7 =	
21	___ x 7 = 35		43	14 x 7 =	
22	___ x 7 = 7		44	98 ÷ 7 =	

COMMON CORE | Lesson 27: | Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced.

Date: 1/29/14

26

engage^{ny} 7.E.50

B

Multiply or divide.

Improvement _____   # Correct _____

1	1 x 7 =		23	__ x 7 = 14	
2	2 x 7 =		24	__ x 7 = 70	
3	3 x 7 =		25	__ x 7 = 21	
4	4 x 7 =		26	14 ÷ 7 =	
5	5 x 7 =		27	7 ÷ 7 =	
6	21 ÷ 7 =		28	70 ÷ 7 =	
7	14 ÷ 7 =		29	35 ÷ 7 =	
8	28 ÷ 7 =		30	21 ÷ 7 =	
9	7 ÷ 7 =		31	__ x 7 = 21	
10	35 ÷ 7 =		32	__ x 7 = 28	
11	10 x 7 =		33	__ x 7 = 63	
12	6 x 7 =		34	__ x 7 = 49	
13	7 x 7 =		35	56 ÷ 7 =	
14	8 x 7 =		36	63 ÷ 7 =	
15	9 x 7 =		37	42 ÷ 7 =	
16	49 ÷ 7 =		38	49 ÷ 7 =	
17	42 ÷ 7 =		39	11 x 7 =	
18	56 ÷ 7 =		40	77 ÷ 7 =	
19	70 ÷ 7 =		41	12 x 7 =	
20	63 ÷ 7 =		42	84 ÷ 7 =	
21	__ x 7 = 7		43	13 x 7 =	
22	__ x 7 = 35		44	91 ÷ 7 =	

COMMON CORE | **Lesson 27:** | Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced. | engage^ny | **7.E.51**
Date: | 1/29/14 | 27

B

Improvement _____   # Correct _____

Multiply or divide.

1	1 x 8 =		23	__ x 8 = 16	
2	2 x 8 =		24	__ x 8 = 80	
3	3 x 8 =		25	__ x 8 = 24	
4	4 x 8 =		26	16 ÷ 8 =	
5	5 x 8 =		27	8 ÷ 8 =	
6	24 ÷ 8 =		28	80 ÷ 8 =	
7	16 ÷ 8 =		29	40 ÷ 8 =	
8	32 ÷ 8 =		30	24 ÷ 8 =	
9	8 ÷ 8 =		31	__ x 8 = 24	
10	40 ÷ 8 =		32	__ x 8 = 32	
11	10 x 8 =		33	__ x 8 = 72	
12	6 x 8 =		34	__ x 8 = 56	
13	7 x 8 =		35	64 ÷ 8 =	
14	8 x 8 =		36	72 ÷ 8 =	
15	9 x 8 =		37	48 ÷ 8 =	
16	56 ÷ 8 =		38	56 ÷ 8 =	
17	48 ÷ 8 =		39	11 x 8 =	
18	64 ÷ 8 =		40	88 ÷ 8 =	
19	80 ÷ 8 =		41	12 x 8 =	
20	72 ÷ 8 =		42	96 ÷ 8 =	
21	__ x 8 = 8		43	13 x 8 =	
22	__ x 8 = 40		44	104 ÷ 8 =	

COMMON CORE

Lesson 29:   Solve a variety of word problems involving area and perimeter using all four operations.
Date: 1/29/14

engage^{ny}   7.E.77

29

A

Correct _____

Multiply or divide.

1	2 x 9 =		23	__ x 9 = 90	
2	3 x 9 =		24	__ x 9 = 18	
3	4 x 9 =		25	__ x 9 = 27	
4	5 x 9 =		26	90 ÷ 9 =	
5	1 x 9 =		27	45 ÷ 9 =	
6	18 ÷ 9 =		28	9 ÷ 9 =	
7	27 ÷ 9 =		29	18 ÷ 9 =	
8	45 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	__ x 9 = 54	
10	36 ÷ 9 =		32	__ x 9 = 63	
11	6 x 9 =		33	__ x 9 = 81	
12	7 x 9 =		34	__ x 9 = 72	
13	8 x 9 =		35	63 ÷ 9 =	
14	9 x 9 =		36	81 ÷ 9 =	
15	10 x 9 =		37	54 ÷ 9 =	
16	72 ÷ 9 =		38	72 ÷ 9 =	
17	63 ÷ 9 =		39	11 x 9 =	
18	81 ÷ 9 =		40	99 ÷ 9 =	
19	54 ÷ 9 =		41	12 x 9 =	
20	90 ÷ 9 =		42	108 ÷ 9 =	
21	__ x 9 = 45		43	14 x 9 =	
22	__ x 9 = 9		44	126 ÷ 9 =	

engage^{ny}

7.F.7

31

B

Multiply or divide.

Improvement _____   # Correct _____

1	1 x 9 =		23	___ x 9 = 18	
2	2 x 9 =		24	___ x 9 = 90	
3	3 x 9 =		25	___ x 9 = 27	
4	4 x 9 =		26	18 ÷ 9 =	
5	5 x 9 =		27	9 ÷ 9 =	
6	27 ÷ 9 =		28	90 ÷ 9 =	
7	18 ÷ 9 =		29	45 ÷ 9 =	
8	36 ÷ 9 =		30	27 ÷ 9 =	
9	9 ÷ 9 =		31	___ x 9 = 27	
10	45 ÷ 9 =		32	___ x 9 = 36	
11	10 x 9 =		33	___ x 9 = 81	
12	6 x 9 =		34	___ x 9 = 63	
13	7 x 9 =		35	72 ÷ 9 =	
14	8 x 9 =		36	81 ÷ 9 =	
15	9 x 9 =		37	54 ÷ 9 =	
16	63 ÷ 9 =		38	63 ÷ 9 =	
17	54 ÷ 9 =		39	11 x 9 =	
18	72 ÷ 9 =		40	99 ÷ 9 =	
19	90 ÷ 9 =		41	12 x 9 =	
20	81 ÷ 9 =		42	108 ÷ 9 =	
21	___ x 9 = 9		43	13 x 9 =	
22	___ x 9 = 45		44	117 ÷ 9 =	

COMMON CORE

Lesson 31: Explore and create unconventional representations of one-half.
Date: 1/29/14

32

engage^ny   7.F.8

A

Multiply.

Correct _____

1	2 x 1 =		23	2 x 7 =	
2	2 x 2 =		24	5 x 5 =	
3	2 x 3 =		25	5 x 6 =	
4	4 x 1 =		26	5 x 7 =	
5	4 x 2 =		27	4 x 5 =	
6	4 x 3 =		28	4 x 6 =	
7	1 x 6 =		29	4 x 7 =	
8	2 x 6 =		30	3 x 5 =	
9	1 x 8 =		31	3 x 6 =	
10	2 x 8 =		32	3 x 7 =	
11	3 x 1 =		33	2 x 7 =	
12	3 x 2 =		34	2 x 8 =	
13	3 x 3 =		35	2 x 9 =	
14	5 x 1 =		36	5 x 7 =	
15	5 x 2 =		37	5 x 8 =	
16	5 x 3 =		38	5 x 9 =	
17	1 x 7 =		39	4 x 7 =	
18	2 x 7 =		40	4 x 8 =	
19	1 x 9 =		41	4 x 9 =	
20	2 x 9 =		42	3 x 7 =	
21	2 x 5 =		43	3 x 8 =	
22	2 x 6 =		44	3 x 9 =	

COMMON CORE

Lesson 32: Explore and create unconventional representations of one-half.
Date: 1/29/14

engage**ny**   7.F.18

33

B

Multiply.

Improvement _____   # Correct _____

1	5 x 1 =		23	5 x 7 =	
2	5 x 2 =		24	2 x 5 =	
3	5 x 3 =		25	2 x 6 =	
4	3 x 1 =		26	2 x 7 =	
5	3 x 2 =		27	3 x 5 =	
6	3 x 3 =		28	3 x 6 =	
7	1 x 7 =		29	3 x 7 =	
8	2 x 7 =		30	4 x 5 =	
9	1 x 9 =		31	4 x 6 =	
10	2 x 9 =		32	4 x 7 =	
11	2 x 1 =		33	5 x 7 =	
12	2 x 2 =		34	5 x 8 =	
13	2 x 3 =		35	5 x 9 =	
14	4 x 1 =		36	2 x 7 =	
15	4 x 2 =		37	2 x 8 =	
16	4 x 3 =		38	2 x 9 =	
17	1 x 6 =		39	3 x 7 =	
18	2 x 6 =		40	3 x 8 =	
19	1 x 8 =		41	3 x 9 =	
20	2 x 8 =		42	4 x 7 =	
21	5 x 5 =		43	4 x 8 =	
22	5 x 6 =		44	4 x 9 =	

COMMON CORE

Lesson 32:   Explore and create unconventional representations of one-half.
Date: 1/29/14

engage^{ny}

7.F.19

A

Multiply or divide.   # Correct _____

1	3 x 2 =		23	2 x 7 =	
2	6 ÷ 2 =		24	3 x 8 =	
3	5 x 3 =		25	4 x 9 =	
4	15 ÷ 5 =		26	5 x 7	
5	4 x 2 =		27	36 ÷ 6 =	
6	8 ÷ 4 =		28	42 ÷ 7 =	
7	3 x 3 =		29	64 ÷ 8 =	
8	9 ÷ 3 =		30	45 ÷ 9 =	
9	4 x 3 =		31	2 x 8 =	
10	12 ÷ 4 =		32	3 x 9 =	
11	5 x 5 =		33	32 ÷ 4 =	
12	25 ÷ 5 =		34	45 ÷ 5 =	
13	6 x 2 =		35	6 x 7 =	
14	21 ÷ 7 =		36	7 x 7 =	
15	7 x 4 =		37	56 ÷ 8 =	
16	16 ÷ 8 =		38	63 ÷ 9 =	
17	18 ÷ 3 =		39	6 x 6 =	
18	18 ÷ 9 =		40	8 x 8 =	
19	8 x 3 =		41	81 ÷ 9 =	
20	36 ÷ 9 =		42	49 ÷ 7 =	
21	14 ÷ 7 =		43	54 ÷ 6 =	
22	6 x 4 =		44	56 ÷ 7 =	

B

Improvement _____   # Correct _____

Multiply or divide.

1	5 x 2 =		23	2 x 7 =	
2	10 ÷ 2 =		24	3 x 8 =	
3	2 x 3 =		25	4 x 9 =	
4	6 ÷ 3 =		26	5 x 7 =	
5	3 x 2 =		27	36 ÷ 6 =	
6	6 ÷ 2 =		28	42 ÷ 7 =	
7	4 x 4 =		29	64 ÷ 8 =	
8	16 ÷ 4 =		30	45 ÷ 9 =	
9	3 x 4 =		31	2 x 8 =	
10	12 ÷ 3 =		32	3 x 9 =	
11	3 x 3 =		33	32 ÷ 4 =	
12	9 ÷ 3 =		34	45 ÷ 5 =	
13	7 x 2 =		35	6 x 7 =	
14	18 ÷ 6 =		36	7 x 7 =	
15	6 x 4 =		37	56 ÷ 8 =	
16	18 ÷ 9 =		38	63 ÷ 9 =	
17	21 ÷ 3 =		39	6 x 6 =	
18	16 ÷ 8 =		40	8 x 8 =	
19	9 x 3 =		41	81 ÷ 9 =	
20	32 ÷ 8 =		42	49 ÷ 7 =	
21	12 ÷ 6 =		43	54 ÷ 6 =	
22	7 x 4 =		44	56 ÷ 7 =	

COMMON CORE | Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
Date: 1/29/14

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