

**4:1** A tablespoon holds 15 ml of olive oil, which is 3 times as much as a teaspoon holds. How many ml of olive oil does a teaspoon hold?  
Equation model: \_\_\_\_\_  
Answer: \_\_\_\_\_

**4:2**

**(1)** Find the three missing lengths and write them on the diagram. Compare answers with a classmate.

**(2)** What is the total area of the diagram?

**(3)** Look for connections between the diagram and the division problem. What connections can you see?

137
7   959
- 700
259
- 210
49
- 49
0

**4:3** Everyone in class measured the length of their pencil. Here are the measurements:

**(1)** How many pencils were measured?  
**(2)** How much longer was the longest pencil than the shortest pencil?  
**(3)** Could two of the pencils be laid end to end to make a total length of 1 foot?

**4:4**

**(1)** Compare  $\frac{5}{9}$  to  $\frac{4}{7}$ . First do it by making equal denominators. Then do it by making equal numerators.

**(2)** Ariana said, " $\frac{300}{400}$  looks greater than  $\frac{3}{4}$ . How can they be the same size?" Write or say an explanation that could help Ariana understand why  $\frac{300}{400}$  and  $\frac{3}{4}$  are the same size.

**(3)** Which is closer to 1 on a number line,  $\frac{4}{5}$  or  $\frac{5}{4}$ ? Tell how you decided. Draw a number line and show  $\frac{4}{5}$  and  $\frac{5}{4}$  accurately on the number line.

**4:5**

**(1a-f)** Write the values of the products. Compare answers with a classmate.

**(1g)** Which answer is twice as much as the answer for (e)?

**(1h)** Which answer is six times as much as the answer for (a)?

**(1i)** Which two answers are equal?

**(2)** Zoe was reading her math book. She saw the equation  $6 \times (4 + \frac{1}{2}) = 24 + 3$ . She said, "I don't get it—where did the 24 and the 3 come from?" Write an explanation that could answer Zoe's question.

$4 \times \frac{1}{7} = \underline{\hspace{1cm}}$  (a)  
 $6 \times \frac{4}{7} = \underline{\hspace{1cm}}$  (b)  
 $86 \times \frac{1}{86} = \underline{\hspace{1cm}}$  (c)  
 $6 \times \frac{8}{2} = \underline{\hspace{1cm}}$  (d)  
 $9 \times \frac{1}{9} = \underline{\hspace{1cm}}$  (e)  
 $9 \times \frac{2}{9} = \underline{\hspace{1cm}}$  (f)

**4:6** Grandpa took a jar of pennies to the bank. He said, "I'd like nickels for this, please." The bank teller poured the pennies into a counting machine. "Eighty-seven dollars and forty-two cents," said the teller. **(1)** How many nickels did Grandpa get? **(2)** Check your answer with an estimate.

**4:7** Write the values of the expressions. Read each completed equation aloud.

3 fifths + 2 fifths = \_\_\_\_\_

$\frac{1}{10} + \frac{3}{100} = \underline{\hspace{1cm}}$  (fraction)  
 = \_\_\_\_\_ (decimal)

$\frac{6}{25} + \frac{6}{25} = \underline{\hspace{1cm}}$   
 $\frac{1}{8} + \frac{5}{8} - \frac{3}{8} = \underline{\hspace{1cm}}$

**4:8**  $L$  is a line,  $R$  is a ray, and  $T$  is a triangle. True or false:

**(1)** Line  $L$  is a line of symmetry for triangle  $T$ .

**(2)** Line  $L$  intersects ray  $R$ .

**(3)** Triangle  $T$  has two angles measuring less than 90 degrees.

**4:9** In gym it was fitness day. Students ran laps around the gym.

I ran  $1\frac{2}{3}$  more laps than Catherine.

I ran  $6\frac{1}{3}$  laps.

How many laps did Catherine run?

**4:10** Write the values of the products and quotients. Check the quotients by multiplying.

Mentally	40 × 20	With pencil and paper
	30 × 11	6,132    48
	12 × 60	5 × 19    × 6    × 39    7   8,722
	480 ÷ 8	

**4:11** A cook in the school kitchen uses 6 oz of cheese to make a pizza. The kitchen has 45 lb of cheese. How many pizzas will that make?

**4:12** The pickup truck can carry  $1\frac{3}{5}$  tons. The super hauler truck can carry 300 times as much. How many tons can the super hauler truck carry?

**4:13**

**(1)** A red rectangle has length  $L = 12$  in and width  $W = 6$  in. Use the formula  $A = L \times W$  to find the area of the red rectangle.

**(2)** A blue rectangle has length 1 ft and width  $\frac{1}{2}$  ft. Draw a picture to show that two copies of the blue rectangle make one square foot. Based on your picture, what is the area of the blue rectangle?

**(3)** Do the red rectangle and the blue rectangle have equal areas? Tell how you decided.

**4:14**  $540,909 + 87,808 - 5,864 + 2,556 = ?$

# Math Milestones™ Task List — Grade 4

The 14 Math Milestones™ tasks for grade 4 have been carefully crafted to embody grade 4 mathematics on one page.

<b>4:1</b> A Tablespoon of Oil	C A	4.OA.A.2
<b>4:2</b> Multi-Digit Division Concepts	C	4.NBT.B.6
<b>4:3</b> Pencil Data	A	4.MD.B.4
<b>4:4</b> Comparing Fractions with Equivalence	C	4.NF.A
<b>4:5</b> Fraction Products and Properties	C	4.NF.B.4a, 4b
<b>4:6</b> Jar of Pennies	A P	4.OA.A.3
<b>4:7</b> Fraction Sums and Differences	C P	4.NF.B.3a–c, 4.NF.C.5, 6
<b>4:8</b> Shapes with Given Positions	C	4.MD.C, 4.G.A
<b>4:9</b> Fitness Day	C A	4.NF.B.3d
<b>4:10</b> Calculating Products and Quotients	P	4.NBT.B
<b>4:11</b> School Kitchen	A	4.MD.A.2, 4.NBT.B.5
<b>4:12</b> Super Hauler Truck	C A	4.NF.B.4c, 4.OA.A.2
<b>4:13</b> Area Units	C	4.MD.A.3
<b>4:14</b> Fluency with Multi-Digit Sums and Differences	P	4.NBT.B.4

C = Task has a conceptual focus.

P = Task has a procedural skill & fluency focus.

A = Task has an application focus.

## Standards for Mathematical Practice

<b>MP.1</b> Make sense of problems and persevere in solving them.	4:6, 4:11
<b>MP.2</b> Reason abstractly and quantitatively.	4:1, 4:2, 4:3, 4:6
<b>MP.3</b> Construct viable arguments and critique the reasoning of others.	4:4, 4:5, 4:13
<b>MP.4</b> Model with mathematics.	4:1, 4:3, 4:6, 4:9, 4:11, 4:12
<b>MP.5</b> Use appropriate tools strategically.	4:5(2), 4:8
<b>MP.6</b> Attend to precision.	4:4, 4:8, 4:10, 4:13, 4:14
<b>MP.7</b> Look for and make use of structure.	4:2, 4:5, 4:7, 4:8, 4:10, 4:14
<b>MP.8</b> Express regularity in repeated reasoning.	4:4, 4:5, 4:7

Standards codes refer to [www.corestandards.org](http://www.corestandards.org). One purpose of the codes is that they may allow a task to shed light on the Standards cited for that task. Conversely, reading the cited Standards may suggest opportunities to extend a task or draw out its implications. Finally, Standards codes may also assist with locating relevant sections in curriculum materials, including materials aligned to comparable standards.



Math Milestones™ was created by Jason Zimba, John W. Staley, Elizabeth Meier, Sandra Alberti, Harold Asturias, and Phil Daro.

Math Milestones™ tasks are not designed for summative assessment. Used formatively, the tasks can reveal and promote student thinking. Student work on tasks could be collected in student portfolios.

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