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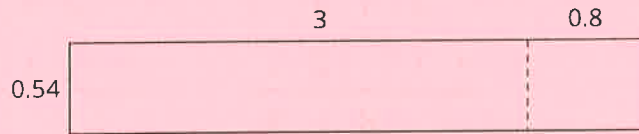
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## Unit 5, Lesson 8: Calculating Products of Decimals

1. Here are an unfinished calculation of  $(0.54) \cdot (3.8)$  and a 0.54-by-3.8 rectangle.

$$\begin{array}{r}
 \phantom{0.}4\phantom{3} \\
 0.5\phantom{4} \\
 \times \phantom{0.}3.8 \\
 \hline
 0.432 \\
 1.62 \\
 \hline
 \end{array}$$



a. Which part of the rectangle has an area of 0.432? Which part of the rectangle has an area of 1.62? Show your reasoning.

b. What is  $(0.54) \cdot (3.8)$ ?

2. Explain how the product of 3 and 65 could be used to find  $(0.03) \cdot (0.65)$ .

3. Use vertical calculation to find each product.

a.  $(5.4) \cdot (2.4)$

b.  $(1.67) \cdot (3.5)$

4. A pound of blueberries costs \$3.98 and a pound of clementines costs \$2.49. What is the combined cost of 0.6 pound of blueberries and 1.8 pounds of clementines? Round your answer to the nearest cent.

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5. Complete the calculations so that each shows the correct sum or difference.

a.

$$\begin{array}{r} 2.14\boxed{\phantom{0}} \\ + 1.\boxed{\phantom{0}}25 \\ \hline \boxed{\phantom{0}}.865 \end{array}$$

b.

$$\begin{array}{r} 29.\boxed{\phantom{0}}\boxed{\phantom{0}} \\ + 1.42 \\ \hline \boxed{\phantom{0}}\boxed{\phantom{0}}.41 \end{array}$$

c.

$$\begin{array}{r} 6.1\boxed{\phantom{0}}\boxed{\phantom{0}} \\ - 1.009 \\ \hline \boxed{\phantom{0}}\boxed{\phantom{0}}.48 \end{array}$$

(from Unit 5, Lesson 3)

6. Which has a greater value:  $7.4 - 0.0022$  or  $7.39 - 0.0012$ ? Show your reasoning.

(from Unit 5, Lesson 4)

7. Andre is planting saplings (baby trees). It takes him 30 minutes to plant 3 saplings. If each sapling takes the same amount of time to plant, how long will it take Andre to plant 14 saplings? If you get stuck, consider using the table.

number of saplings	time in minutes
3	30
1	
14	

(from Unit 2, Lesson 12)

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## Unit 5, Lesson 9: Using the Partial Quotients Method

1. Here is one way to find  $2,105 \div 5$  using partial quotients.

$$\begin{array}{r}
 \boxed{421} \\
 1 \\
 20 \\
 400 \\
 5 \overline{) 2105} \\
 \underline{-2000} \\
 105 \\
 \underline{-100} \\
 5 \\
 \underline{-5} \\
 0
 \end{array}$$

Show a different way of using partial quotients to divide 2,105 by 5.

2. Andre and Jada both found  $657 \div 3$  using the partial quotients method, but they did the calculations differently, as shown here.

$$\begin{array}{r}
 \boxed{219} \\
 9 \\
 10 \\
 200 \\
 3 \overline{) 657} \\
 \underline{-600} \\
 57 \\
 \underline{-30} \\
 27 \\
 \underline{-27} \\
 0
 \end{array}$$

Andre's Work

$$\begin{array}{r}
 \boxed{219} \\
 9 \\
 60 \\
 100 \\
 50 \\
 3 \overline{) 657} \\
 \underline{-150} \\
 507 \\
 \underline{-300} \\
 207 \\
 \underline{-180} \\
 27 \\
 \underline{-27} \\
 0
 \end{array}$$

Jada's Work

a. How is Jada's work similar to and different from Andre's work?

b. Explain why they have the same answer.

3. Which might be a better way to evaluate  $1,150 \div 46$ : drawing base-ten diagrams or using the partial

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quotients method? Explain your reasoning.

4. Here is an incomplete calculation of  $534 \div 6$ .

$$\begin{array}{r}
 \boxed{89} \\
 9 \\
 80 \\
 6 \overline{)534} \\
 \underline{\phantom{0}0} \phantom{0} \\
 \phantom{0}3 \phantom{0} \\
 \underline{\phantom{0}0} \phantom{0} \\
 \phantom{0}34 \\
 \underline{\phantom{0}0} \phantom{0} \\
 \phantom{0}34 \\
 \underline{\phantom{0}0} \phantom{0} \\
 \phantom{0}0
 \end{array}$$

Write the missing numbers (marked with "?") that would make the calculation complete.

5. Use the partial quotients method to find  $1,032 \div 43$ .

6. Which of the polygons has the greatest area?

- A. A rectangle that is 3.25 inches wide and 6.1 inches long.
- B. A square with side length of 4.6 inches.
- C. A parallelogram with a base of 5.875 inches and a height of 3.5 inches.
- D. A triangle with a base of 7.18 inches and a height of 5.4 inches.

(from Unit 5, Lesson 8)

7. One micrometer is a millionth of a meter. A certain spider web is 4 micrometers thick. A fiber in a shirt is 1 hundred-thousandth of a meter thick.

a. Which is wider, the spider web or the fiber? Explain your reasoning.

b. How many meters wider?

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## Unit 5, Lesson 10: Using Long Division

1. Kiran is using long division to find  $623 \div 7$ .

$$\begin{array}{r} 7 \overline{) 623} \end{array}$$

He starts by dividing 62 by 7. In which decimal place should Kiran place the first digit of the quotient (8)?

- a) Hundreds
  - b) Tens
  - c) Ones
  - d) Tenths
2. Here is a long-division calculation of  $917 \div 7$ .

$$\begin{array}{r} 131 \\ 7 \overline{) 917} \\ \underline{-7} \phantom{0} \\ 21 \phantom{0} \\ \underline{-21} \phantom{0} \\ 7 \phantom{0} \\ \underline{-7} \\ 0 \end{array}$$

- a. There is a 7 under the 9 of 917. What does this 7 represent?
  - b. What does the subtraction of 7 from 9 mean?
  - c. Why is a 1 written next to the 2 from  $9 - 7$ ?
3. Han's calculation of  $972 \div 9$  is shown here.

$$\begin{array}{r} 180 \\ 9 \overline{) 972} \\ \underline{-9} \phantom{0} \\ 72 \phantom{0} \\ \underline{-72} \\ 0 \phantom{0} \\ \underline{-0} \\ 0 \end{array}$$

- a) Find  $180 \cdot 9$ .
- b) Use your calculation of  $180 \cdot 9$  to explain how you know Han has made a mistake.
- c) Identify and correct Han's mistake.

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4. Find each quotient.

a.

b.

c.

$$5 \overline{)465}$$

$$12 \overline{)924}$$

$$3 \overline{)1107}$$

5. One ounce of a yogurt contains of 1.2 grams of sugar. How many grams of sugar are in 14.25 ounces of yogurt?

a) 0.171 grams

b) 1.71 grams

c) 17.1 grams

d) 171 grams

(from Unit 5, Lesson 7)

6. The mass of one coin is 16.718 grams. The mass of a second coin is 27.22 grams. How much greater is the mass of the second coin than the first? Show your reasoning.

(from Unit 5, Lesson 4)