

6th Grade Math Unit 5 Study Guide

How to use:

- Solve a sample problem aligned to each lesson
- If you get stuck, look at the Lesson Summary for the lesson to help guide your thinking linked [here](#)
- Check your answer against the answer key linked [here](#)
- Practice explaining how you solved the problem and why your process makes sense!

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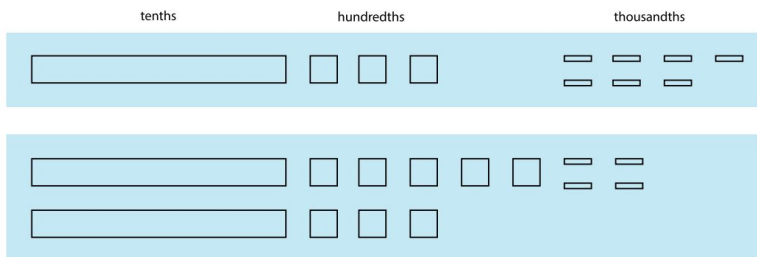
Lesson 1

Tickets to a show cost \$5.50 for adults and \$4.25 for students. A family is purchasing 2 adult tickets and 3 student tickets.

- Estimate the total cost.
- What is the exact cost?
- If the family pays \$25, what is the exact amount of change they should receive?

Lesson 2

Here are diagrams that represent 0.137 and 0.284.



- Use the diagram to find the value of $0.137 + 0.284$. Explain your reasoning.
- Calculate the sum vertically.
- How was your reasoning in the first two questions different? How was it similar or the same?

$$\begin{array}{r} 0.137 \\ + 0.284 \\ \hline \end{array}$$

Lesson 3

a.
$$\begin{array}{r} 142.6 \\ - 1.4 \\ \hline \square\square\square.\square \end{array}$$

b.
$$\begin{array}{r} 38.60 \\ - 6.75 \\ \hline \square\square.\square5 \end{array}$$

c.
$$\begin{array}{r} 241.76 \\ - 2.18 \\ \hline \square\square\square.\square8 \end{array}$$

Lesson 4

For each subtraction problem, circle the correct calculation.

a. $7.2 - 3.67$

b. $16 - 1.4$

a.

$\begin{array}{r} 7.2 \\ - 3.67 \\ \hline 3.05 \end{array}$	$\begin{array}{r} 07.2 \\ - 3.67 \\ \hline 3.05 \end{array}$	$\begin{array}{r} 7.20 \\ - 3.67 \\ \hline 3.53 \end{array}$
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b.

$\begin{array}{r} 16 \\ - 1.4 \\ \hline 0.2 \end{array}$	$\begin{array}{r} 16.0 \\ - 1.40 \\ \hline 0.20 \end{array}$	$\begin{array}{r} 16.0 \\ - 1.4 \\ \hline 14.6 \end{array}$
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Lesson 5

Calculate the value of each expression by writing the decimal factors as fractions, then writing their product as a decimal. Show your reasoning.

- a. $(0.01) \cdot (0.02)$
- b. $(0.3) \cdot (0.2)$
- c. $(1.2) \cdot 5$
- d. $(0.9) \cdot (1.1)$
- e. $(1.5) \cdot 2$

Lesson 6

Find each product. Show your reasoning.

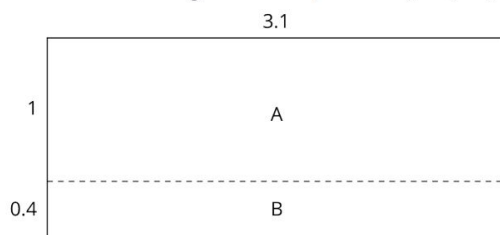
- a. $(1.2) \cdot (0.11)$
- b. $(0.34) \cdot (0.02)$
- c. $120 \cdot (0.002)$

One gallon of gasoline in Buffalo, New York costs \$2.29. In Toronto, Canada, one liter of gasoline costs \$0.91. There are 3.8 liters in one gallon.

- a. How much does one gallon of gas cost in Toronto? Round your answer to the nearest cent.
- b. Is the cost of gas greater in Buffalo or in Toronto? How much greater?

Lesson 7

Here is an area diagram that represents $(3.1) \cdot (1.4)$.



- a. Find the areas of sub-rectangles A and B.
- b. What is the area of the 3.1 by 1.4 rectangle?

Lesson 8

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

Lesson 9

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

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

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

Lesson 10

Find each quotient.

a.

$$5 \overline{) 465}$$

b.

$$12 \overline{) 924}$$

c.

$$3 \overline{) 1107}$$

Lesson 11

Use long division to find each quotient. Write your answer as a decimal.

a. $99 \div 12$

b. $216 \div 5$

c. $1,988 \div 8$

Lesson 12

a. Explain why all of these expressions have the same value.

$4500 \div 90$

$450 \div 9$

$45 \div 0.9$

$4.5 \div 0.09$

b. What is the common value?

Lesson 13

A student said, "To find the value of $109.2 \div 6$, I can divide 1,092 by 60."

a. Do you agree with this statement?
Explain your reasoning.

b. Calculate the quotient of $109.2 \div 6$
using any method of your choice.

Lesson 14

A roll of ribbon was 12 meters long. Diego cut 9 pieces of ribbon that were 0.4 meter each to tie some presents. He then used the remaining ribbon to make some wreaths. Each wreath required 0.6 meter. For each question, explain your reasoning.

a. How many meters of ribbon were
available for making wreaths?

b. How many wreaths could Diego make
with the available ribbon?