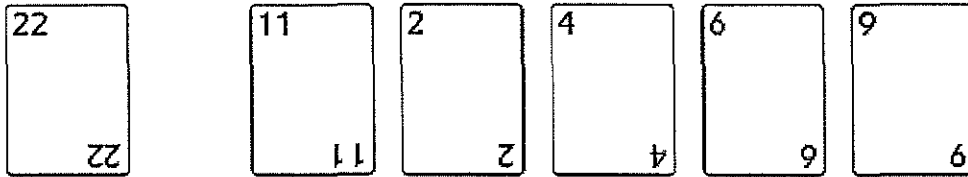# Unit 1 Review

Name: **Answers**

1. Jacari was playing *Name That Number*. He had the cards shown below. Write two different expressions that show how Jacari could play his cards. Use grouping symbols in at least one of the expressions.
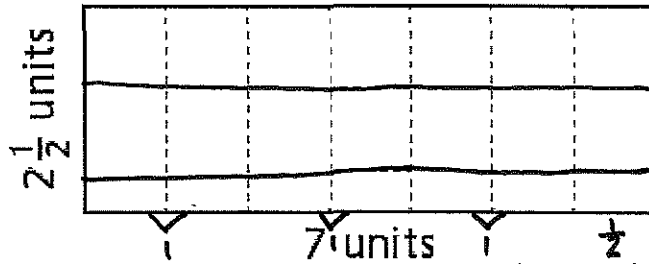
22	11	2	4	6	9
22	11	2	4	9	6

Target
Number

11×2 $(9 + 2) + 11$ $(6 \times 4) - 2$

$(9 \times 2) + 4$

*answers may vary

2. Find the area of the rectangle. Write a number sentence to show your thinking.

$2\frac{1}{2}$ units

7 units

$A = \ell \times w$

$A = 17\frac{1}{2} u^2$

$A = 7 \times 2\frac{1}{2}$ $A = (7 \times 2) + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

3. Solve.
a. $7 * (5 + 4) =$ **63**

b. $(7 * 5) + 4 =$ **39**

c. **9** $= (35 \div 5) + 2$

d. **5** $= 35 - (5 + 2)$

4. Select the items that have volume.

(A) bathtub
B) the tip of a marker
(C) a can of tomato sauce
D) a drawing of a triangle
(E) the inside of a planet
F) the surface of a mirror

5.
a. Hiroto filled a box and said its volume was 58 balls Aisha filled the same box and said its volume was 67 cubes Explain how Hiroto and Aisha cold get different volumes for the same box.

They got different volumes because using balls to find volume leaves gaps. Using cubes to find volume fills up the space better.

b. Are balls or cubes better for measuring the volume of a rectangular prism? Why?

Cubes are better because they will fit tightly together while balls will leave spaces.

6.

How many cubes would it take to fill this prism?
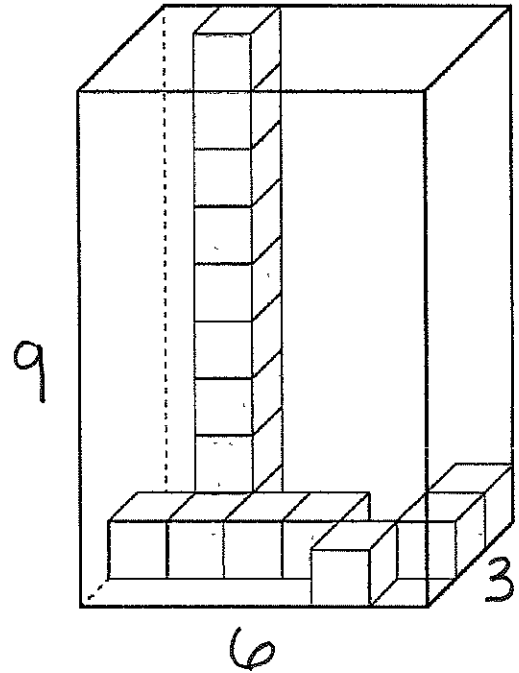
_162_ cubes

What is the volume of this prism?

_162_ cubic units

$$V = l \times w \times h$$
$$V = 9 \times 6 \times 3$$

$$\begin{array}{r} \overset{1}{54} \\ \times 3 \\ \hline 162 \end{array}$$

9

6

3

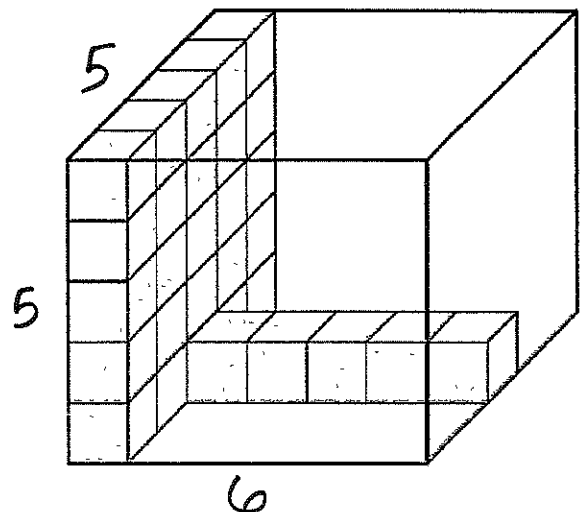7

How many cubes would it take to fill this prism?

_150_ cubes

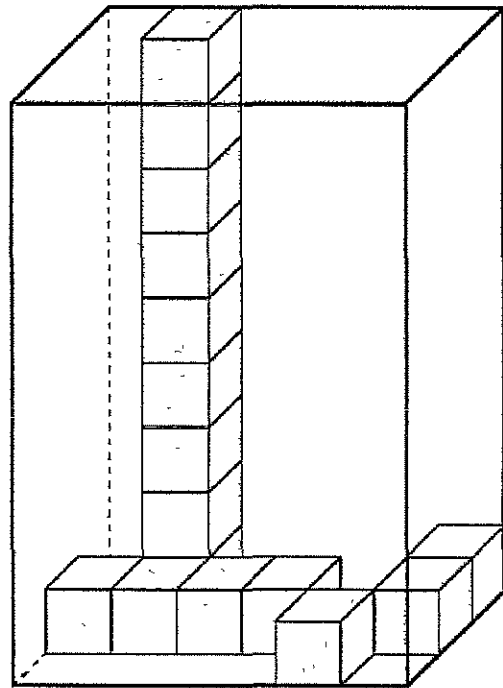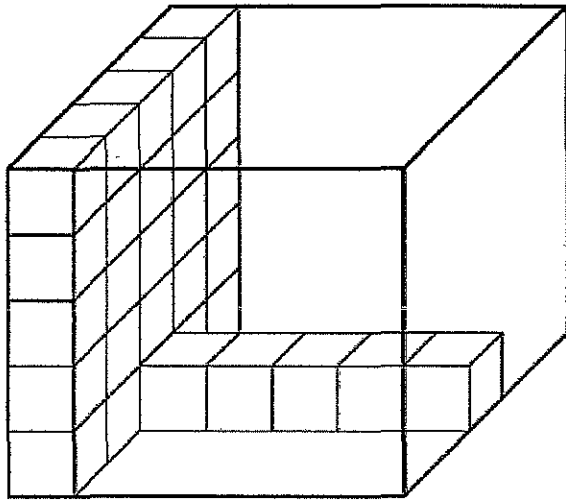What is the volume of this prism?

_150_ cubic units

$$V = B \times h$$
$$V = 25 \times 6$$

$$\begin{array}{r} \overset{3}{25} \\ \times 6 \\ \hline 150 \end{array}$$
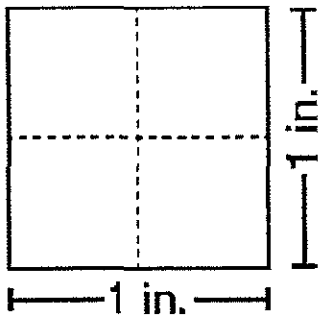

5

5

6

8. Compare the strategies you used to find the volume in the two previous problems. How were they the same? How were they different?
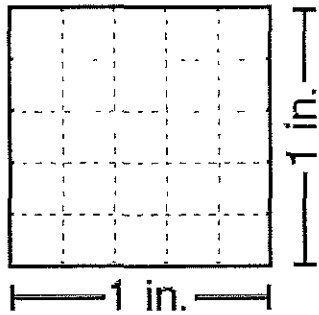
I used the formula V=B×h for one and I used the formula V=l×w×h for the other. For both, I had to find the length, width, and height.
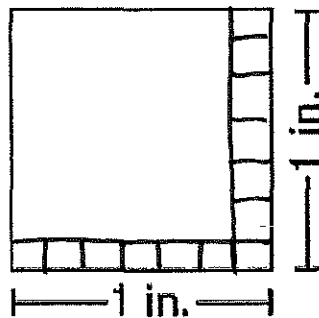
9.
4 squares with side length $\frac{1}{2}$ inch fit in 1 square inch.

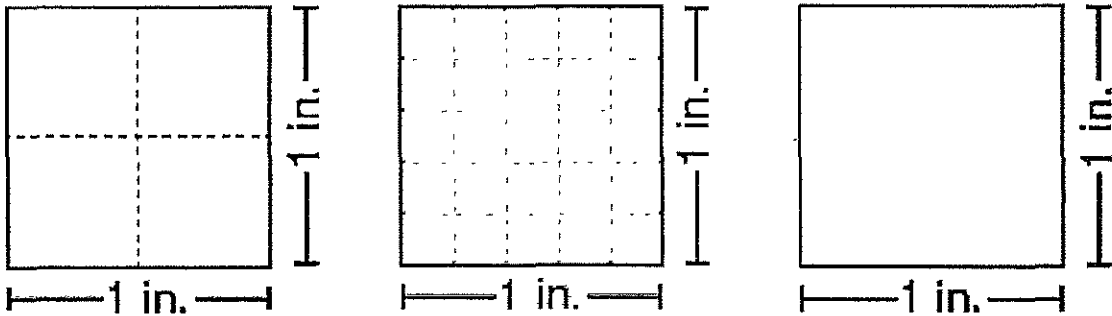25 squares with side length $\frac{1}{5}$ inch fit in 1 square inch.

How many squares with side length $\frac{1}{7}$ inch will fit into 1 square inch? You may want to draw a picture to help you.

49 squares

10.

a. What pattern do you notice about the relationship between the side length of the smaller squares and the number of squares that will fit in 1 square inch?

**b.** Use the pattern to explain how many squares with side length 1/9 inch would fit into 1 square inch.

The denominator of the fraction is the same as the number of squares along each side. Then multiply the l x w to find area.

81 squares would fit

Find the volume of the rectangular prism. Remember to include a unit.
Write a number sentence to show how you found the volume.
Use the following formulas to help you $V = l \times w \times h$ and $V = B \times h$.

9 ft

7 ft

5 ft
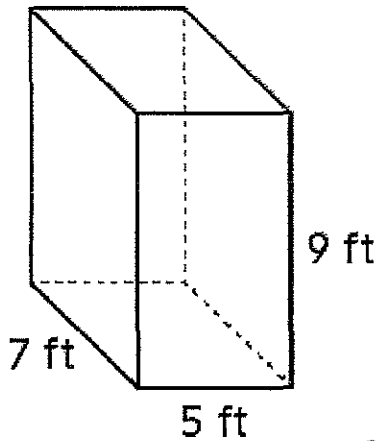
$V = 9 \times 5 \times 7$

$$\begin{array}{r} \overset{3}{4}5 \\ \times 7 \\ \hline 315 \end{array}$$
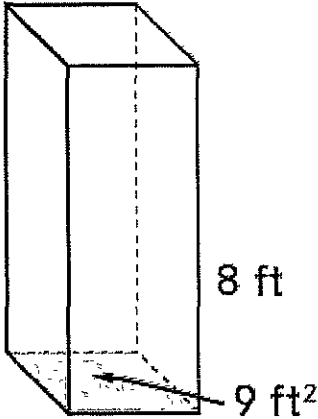
$315 ft^3$

11.
Find the volume of the rectangular prism Remember to include a unit.
Write a number sentence to show how you found the volume.
Use the following formulas to help you: $V = l \times w \times h$ and $V = B \times h$

$$V = 9 \times 8$$

$$V = 72 \, ft^3$$

8 ft

9 ft²

12.
Kara was raising money to donate. She earned $36 from her lemonade stand and $12 for watching her neighbor's pets. She donated half the money to the food bank.

Write an expression that models the amount of money Kara donated.
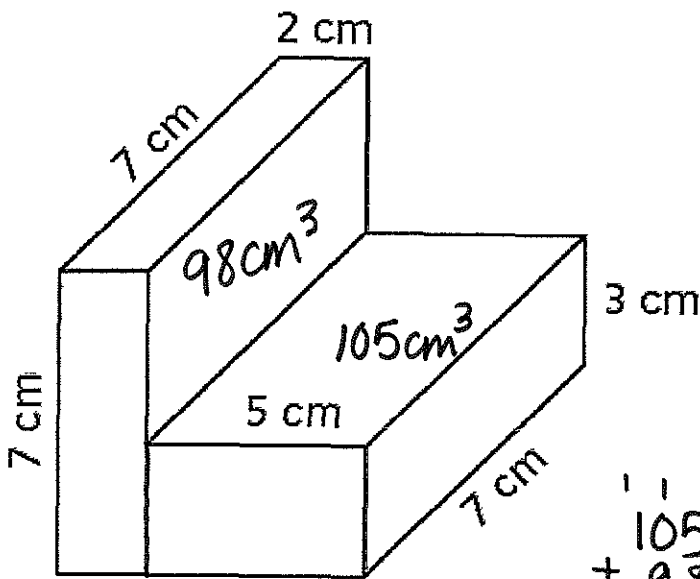
Expression: $(36 + 12) \div 2$

Use paper and pencil to solve the problem.

$$(36 + 12) \div 2$$

$$48 \div 2 = 24$$

13.
a. *Find the volume of this figure.*

2 cm

7 cm

98cm³

105cm³

3 cm

5 cm

7 cm

7 cm

$V = 7 \times 7 \times 2$

$\begin{array}{r} 49 \\ \times\ 2 \\ \hline 98 \end{array}$

$V = 5 \times 7 \times 3$

$\begin{array}{r} 35 \\ \times\ 3 \\ \hline 105 \end{array}$

$\begin{array}{r} 105 \\ +\ 98 \\ \hline 203 \end{array}$

b. Explain how you found the volume.

First we have to split the figure into 2 rectangles. Then, find the volume of each rectangle using $V = \ell \times w \times h$. Then, we will add the two volumes together to find total volume.

Total V = 203 cm³

14. Use paper and pencil to solve the problem.

Write the volume of each figure and the number sentence you used to find it. Then identify and circle the card that would win the round of Prism Pile-Up. Remember $V = l \times w \times h$.
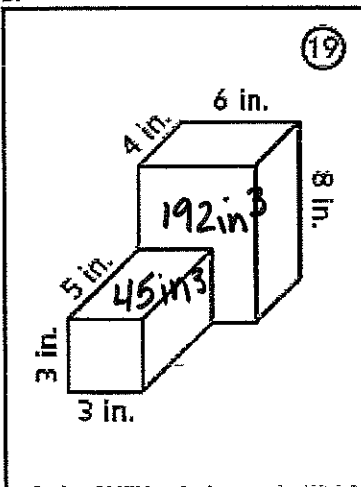
a.

⑪

9 in.

7 in.

4 in.
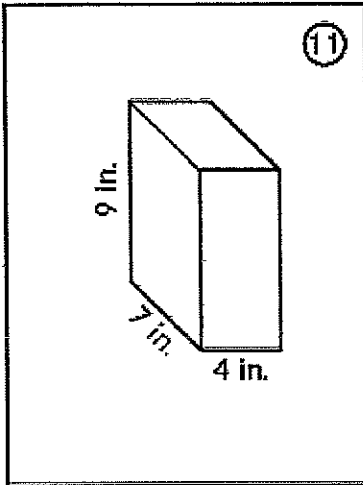
$V = 9 \times 7 \times 4$

$\begin{array}{r} \overset{1}{63} \\ \times \ 4 \\ \hline 252 \end{array}$

$V =$ __252__ cubic centimeters

Number Sentence:
$V = 9 \times 7 \times 4$

b.

⑲

6 in.

4 in.

$192 in^3$

8 in.

5 in.

$45 in^3$

3 in.

3 in.

$V = 3 \times 3 \times 5 = 45$

$V = 4 \times 6 \times 8$

$\begin{array}{r} 1 \\ 192 \\ + \ 45 \\ \hline 237 \end{array}$

$\begin{array}{r} \overset{3}{24} \\ \times \ 8 \\ \hline 192 \end{array}$

$V =$ __237__ cubic centimeters

Number Sentence:
$V = (3 \times 3 \times 5) + (4 \times 6 \times 8)$