



NAME _____

DATE _____

PERIOD _____

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Unit 1, Lesson 16

Practice Problems

1. Match each quantity with an appropriate unit of measurement.

- | | | |
|--|--------|-----------------------|
| A. The surface area of a tissue box | 5 | 1. Square meters |
| B. The amount of soil in a planter box | 3 or 4 | 2. Yards |
| C. The area of a parking lot | 1 | 3. Cubic inches |
| D. The length of a soccer field | 2 | 4. Cubic feet |
| E. The volume of a fish tank | 3 or 4 | 5. Square centimeters |

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2. Here is a figure built from snap cubes.



a. Find the volume of the figure in cubic units.

$$- 4 \text{ un}^3 \text{ (4 blocks)}$$

b. Find the surface area of the figure in square units.

$$\begin{array}{r} \text{Sides } 4(4) = 16 \\ \text{Top \& Bottom } 2(1) \quad + 2 \\ \hline 18 \text{ un}^2 \end{array}$$

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c. True or false: If we double the number of cubes being stacked, both the volume and surface area will double. Explain or show how you know.

if it were 8 tall

$$\begin{array}{r} \text{sides } 4(8) \\ \text{Top \& Bottom } 2(1) \\ \hline \end{array}$$

32

+ 2

$$\textcircled{34 \text{ un}^2} \neq \text{36 un}^2$$

3. Lin said, "Two figures with the same volume also have the same surface area."

False - see back

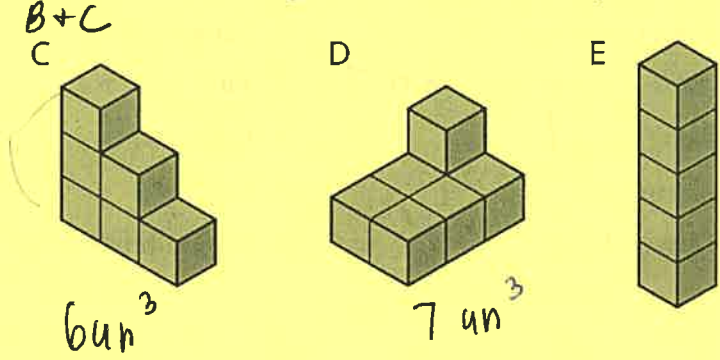
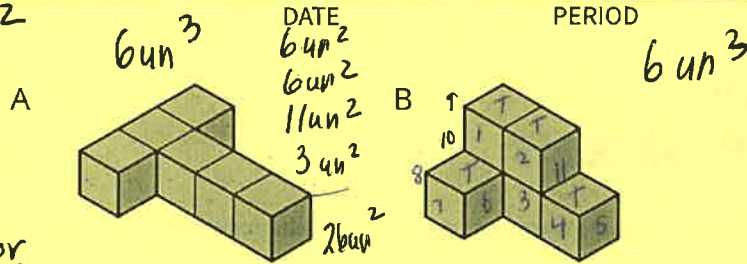
double SA = 36 un^2
for 4 cubes
 $34 \text{ un}^2 \neq 36 \text{ un}^2$

NAME *B+C both 24un²*

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a. Which two figures suggest that her statement is true?

b. Which two figures could show that her statement is *not* true?



front 6un²
back 6un²
steps 6un²
side 3un²
bottom 3un²

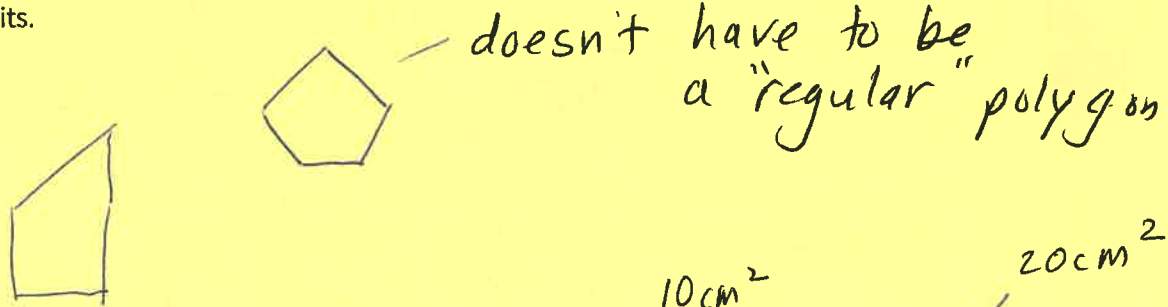
24un²

stfm 4un²
top + top 2un² + 2un²
10un²
5un²

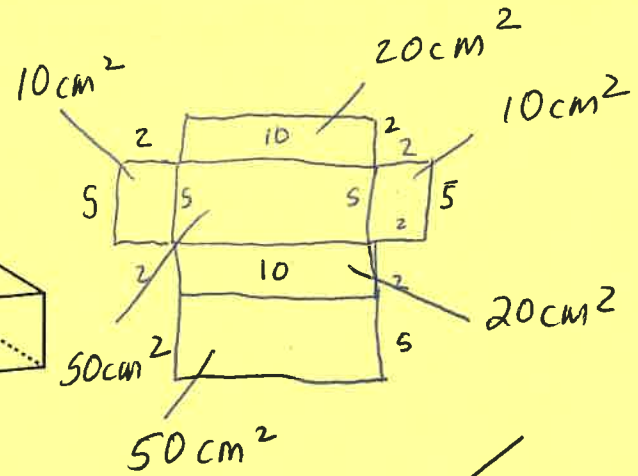
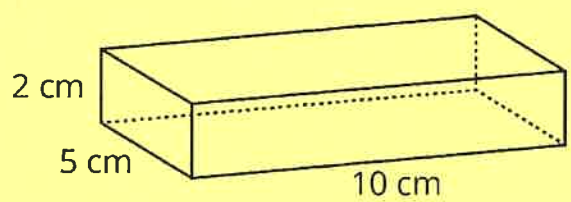
24un²

Challenge

4. Draw a pentagon (five-sided polygon) that has an area of 32 square units. Label all relevant sides or segments with their measurements, and show that the area is 32 square units.



5. a. Draw a net for this rectangular prism.
b. Find the surface area of the rectangular prism.



2(10) 20
2(50) 100
2(20) 40

160 cm²

1/2