



## Unit 1 Challenge

① Solve.

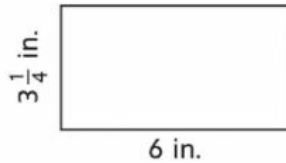
a.  $8 * [(15 - 9) \div 3] = \underline{\hspace{2cm}}$

b.  $\underline{\hspace{2cm}} = \{160 \div (4 * 20)\} * 3$

c.  $\underline{\hspace{2cm}} = [(6 + 2) * (9 + 16)] \div 4$

d.  $100 \div \{(2 + 3) * (6 - 4)\} = \underline{\hspace{2cm}}$

② Find the area of the rectangle. Remember to include a unit.



Area =  $\underline{\hspace{4cm}}$

$\underline{\hspace{4cm}}$  (number sentence)

③ Annika is making a quilt with squares that are  $\frac{1}{2}$  foot in length on each side. The finished quilt will be 4 feet long and  $3\frac{1}{2}$  feet wide.

How many quilt squares will Annika need? You may draw a picture to help you.

Answer:  $\underline{\hspace{2cm}}$  quilt squares

What is the area of the quilt? Explain how you got your answer.

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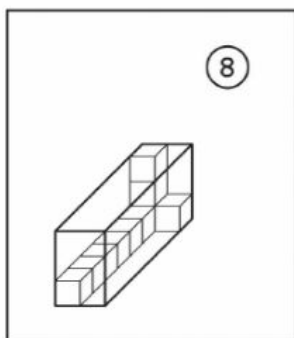


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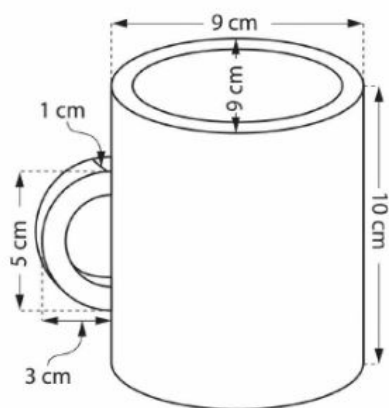


## Unit 1 Challenge (continued)

- ④ Draw a figure that would beat this card in a game of *Prism Pile-Up*.



- ⑤ a. Sketch a mathematical model of the coffee mug using rectangular prisms. Use your model to answer the following questions about the mug.



- b. The volume of the entire coffee mug is about \_\_\_\_\_.
- c. The volume of coffee that the mug would hold is about \_\_\_\_\_.
- d. Why might you want to know the volume of the entire coffee mug?

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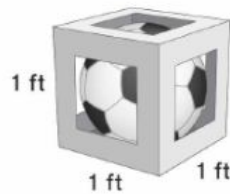
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## Unit 1 Open Response Assessment

### Volume

Monica works at Super Sports Supplies and is packing a box of 30 soccer balls to send to a school. Each soccer ball is packaged in a box that measures 1 cubic foot in volume.



The volume of the box is  
1 cubic foot.

Monica is placing the individual soccer ball boxes into a larger box to send to the school.

- ① What is the minimum volume of a box that Monica could use to send 30 soccer balls?  
How do you know?



## Unit 1 Open Response Assessment (continued)

- ② Monica began to fill a box with the soccer balls and then took a break. The picture below shows what the box looked like when she took her break. Will all 30 soccer balls fit in this box? How do you know?

