

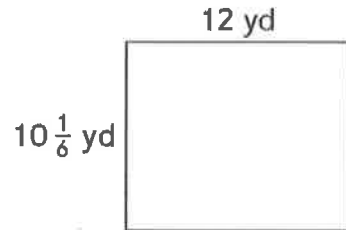


Unit 8 Assessment

A group of neighbors converted an old parking lot into a play area.

A model of the play area is shown below. Use the model to answer Problems 1–3.

Remember to pay attention to the units in each problem.



- ① The neighbors want to put a fence around the play area. They plan to buy chain-link fencing sold by the foot. How many **feet** of fencing should they buy to completely surround the play area? Explain how you know.

They should buy _____ feet of fencing.

Explanation: _____

Unit 8 Assessment (continued)

② The neighbors want to put a fresh coat of paint on the play area.

a. What is the area of the playing surface in **square yards**?

_____ square yards

b. How many **square feet** is that?

Hint: Think about how many square feet are in 1 square yard.

_____ square feet

c. If each can of paint covers about 50 square feet, how many cans of paint should the neighbors buy? Explain.

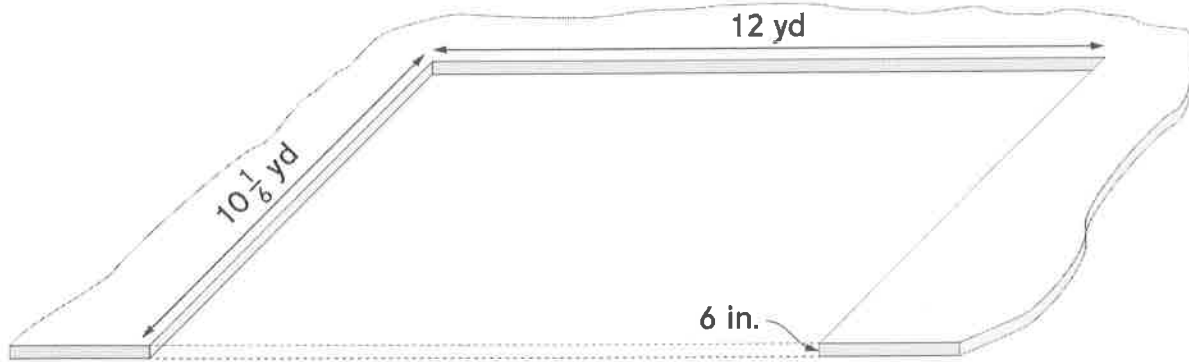
The neighbors should buy _____ cans of paint.

Explanation: _____



Unit 8 Assessment (continued)

- ③ Six inches of snow fell in the neighborhood. One neighbor shoveled all the snow off the play area.



- a. Six inches is equal to how many feet? _____ ft
- b. How many **cubic feet** of snow did the neighbor remove? Explain.

The neighbor removed _____ cubic feet of snow.

Explanation: _____

- ④ A typical 14-year-old blinks about 10 times per minute.
- a. How many times does a typical 14-year-old blink in one hour?
 About _____ times
- b. How many times does a typical 14-year-old blink in one day?
 About _____ times
- c. How many times does a typical 14-year-old blink in one week?
 About _____ times



Unit 8 Assessment (continued)

- 5 Temica won a \$1,000 scholarship for a weeklong trip to Washington, D.C., with her youth orchestra. Her travel, hotel, and meals will cost \$734. Temica can use the rest of her scholarship to do extra activities and purchase souvenirs. Prices for various items are given below.

Item	Cost	Item	Cost
Snack from food truck	\$4.95	Drink from food truck	\$2.95
Ticket to symphony concert	\$15.00	Carousel ride	\$3.50
T-shirt	\$19.95	Sweatshirt	\$34.50
Postcard	\$1.50	Postage stamp	\$0.49
Coffee mug	\$12.90	Calendar	\$16.70

- a. Use the accounting sheet below to help Temica plan how to spend her remaining money. Note that you only need to find approximate total costs. Write a number sentence to show how you found the approximate total cost for each item.

Item	Quantity	Unit Cost	Approximate Total Cost
Total cost:			

- b. Explain the decisions you made to complete Part a.



Unit 8 Assessment (continued)

- 6 Marla measured the height and upper arm length (from shoulder to elbow) of five people in her family. The table at the right shows her data.

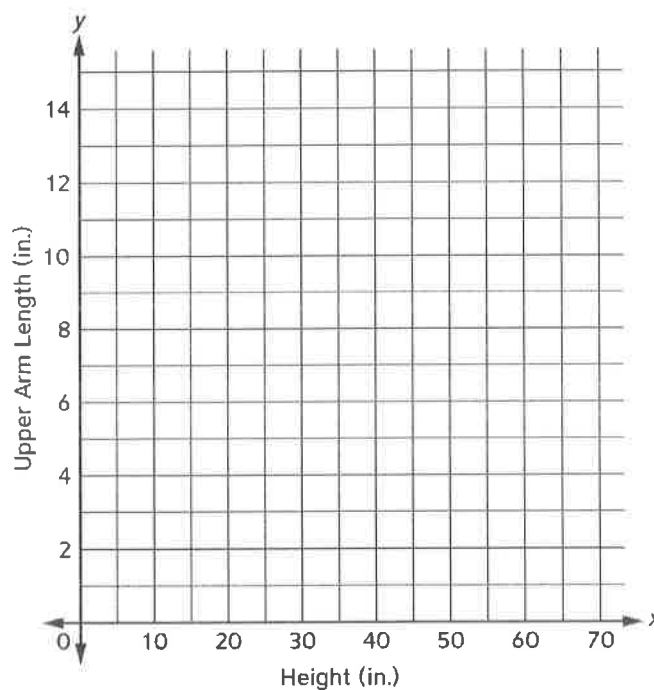
Height (inches)	Upper Arm Length (inches)
36	7
50	10
56	12
66	14
70	15

- a. Write Marla's data as ordered pairs.

- b. Plot the points on this grid.

Then use line segments to connect the points in order.

- c. Does a person's height seem to be related to their upper arm length? Explain how you know.



- 7 A red kangaroo's powerful hind legs allow it to travel about 25 feet with each jump. About how many jumps would a red kangaroo take to travel 1 mile? Show your work. *Hint: 1 mile = 5,280 feet*

About _____ jumps

Unit 8

8. Follow the steps to find the number.

Write 3 in the thousands place.

Write 5 in the tens place.

Write 6 in the tenths place.

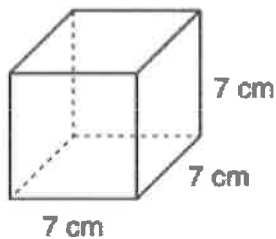
Write 1 in the hundreds place.

Write 4 in the ones place.

Write 8 in the hundredths place.

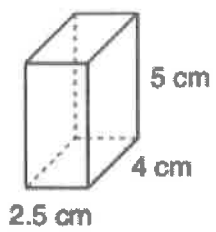
_____ . _____

9. Find the volume.



$V =$ _____

10. Find the volume.



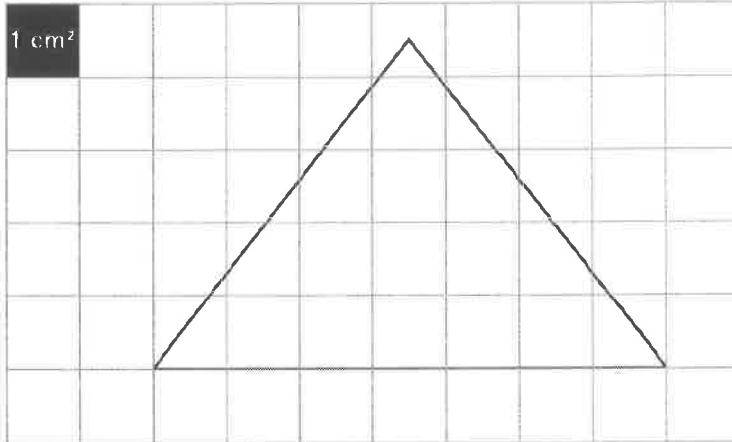
$V =$ _____



Unit 8 Challenge

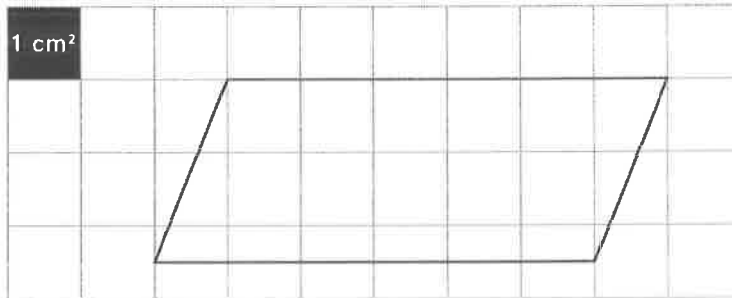
Use the rectangle method to find the area of the figures shown below.

①



Area = _____ cm^2

②



Area = _____ cm^2

③

A rectangular garden plot has an area of $38\frac{1}{2}$ square feet.

a. Give possible dimensions in feet for the length and width of the garden.

b. What is the area of the garden in square inches?

_____ square inches

c. Explain how you solved Part b. _____



Unit 8 Challenge (continued)

- 4 About how old is someone who is 1 million minutes old? Report your answer in years, months, weeks, days, hours, and minutes, using the largest number of each unit possible. Show your work.

Answer: About _____

- 5 Carl counted the number of times his heart beat in 15 seconds after he did 0, 10, and 20 jumping jacks. He wrote his three data points as ordered pairs and plotted them on this graph.

Carl said he could use this graph to predict how many times his heart would beat in 15 seconds after doing 60 jumping jacks. He drew the dotted line shown and said, "The point (60, 42) is on this line. My heart will beat 42 times in 15 seconds if I do 60 jumping jacks." Do you agree with Carl's prediction? Explain your answer.

