

Unit 5 Math Test Review

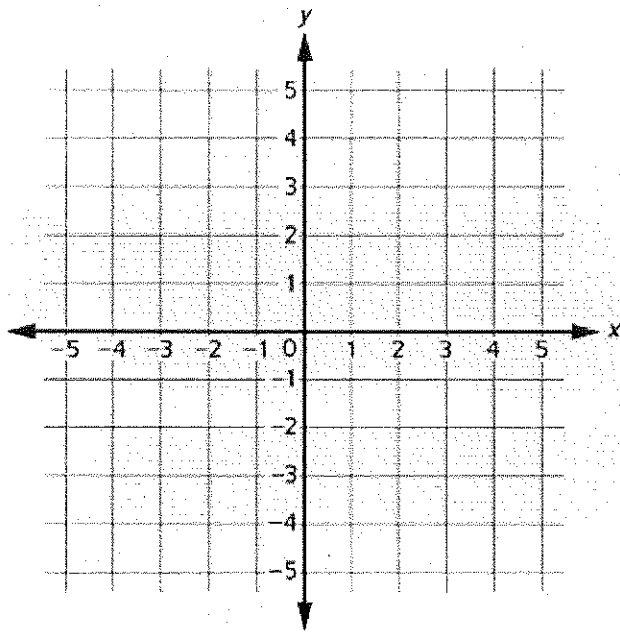
Name: _____ #: _____

Parent Signature (test alert): _____

Test is on: _____

1.

Use paper and pencil to solve the problem.



Plot and label the points G, H, and J on the coordinate grid.

Connect the points to make a triangle.

G: (4, 4.5) H: (4, -2) J: (-3, -2)

Write a number sentence for calculating the length of each line segment.

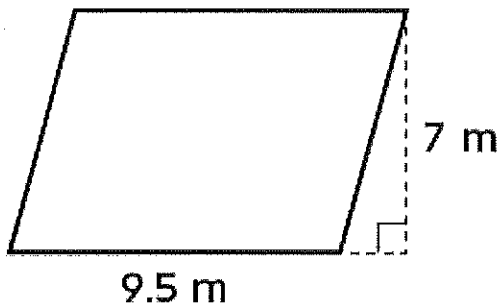
Length of \overline{GH} :

Length of \overline{HJ} :

2. Find the area of triangle GHI you created in the previous problem. _____ square units

3.

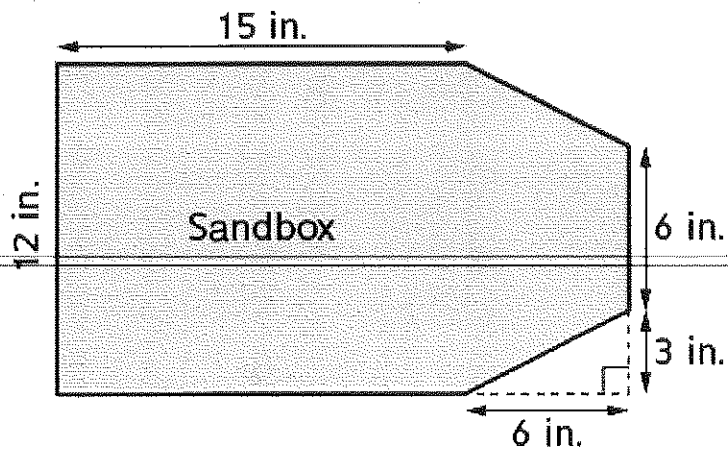
Find the area of the parallelogram.



___ m²

4.

Find the area of the sandbox play area in the park shown below.
Explain how you solved the problem.



Area of the sandbox play area:

Explanation:

5.

a. Identify the units you might use when reporting surface area.

m^2 m^3 m cm^2 cm^3 cm yd^2 yd^3 yd

b. Describe a common feature of these units for surface area.

c. Explain why they have this feature in common.

6.

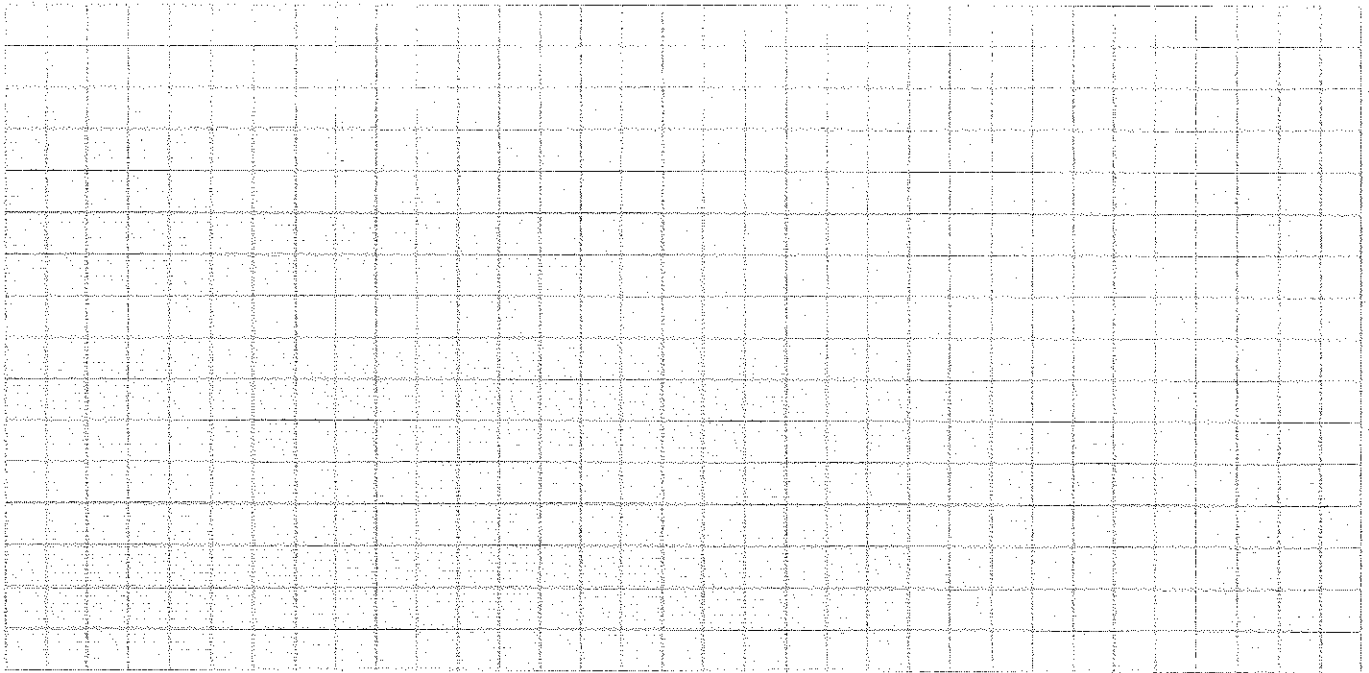
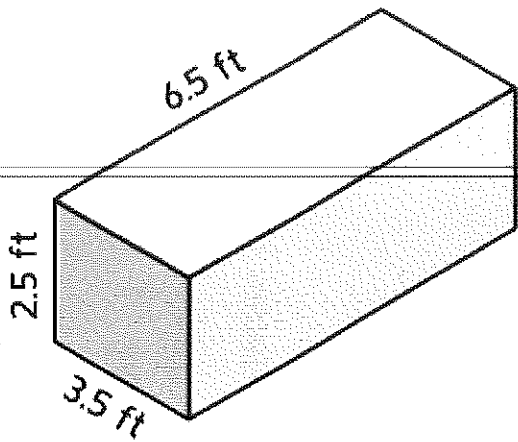
Identify the units you might use when reporting volume.

m^2 m^3 m cm^2 cm^3 cm yd^2 yd^3 yd

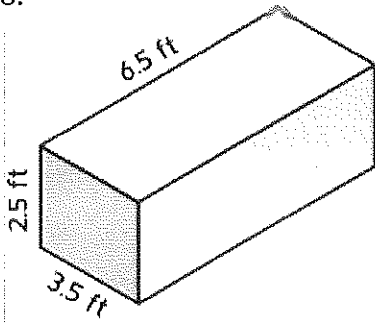
7.

Use paper and pencil to solve the problem.

Draw a net for the block in the picture.
The block is shaped like a rectangular prism.
Use the scale: 1 block = 1 ft²



8.



Mrs. Washington painted all faces of the above block blue.

Explain how she could find the total surface area of the block she painted.

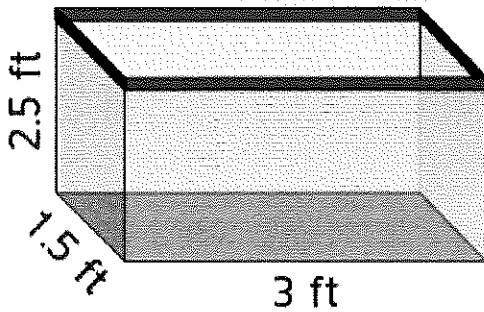
Then, find the surface area of the block.

Explanation:

Surface Area:

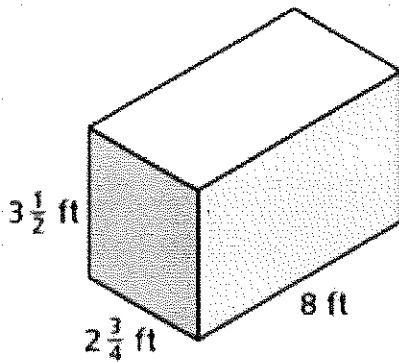
9.

If the fish tank were filled to the top, how many cubic feet of water would it hold?



Volume: ft³

10.



a. What is the volume of the prism?

 ft³

b. How many cubes with $\frac{1}{4}$ -foot side lengths will fit inside the prism if they are packed with no gaps?

 cubes

Unit 5 Math Test Review

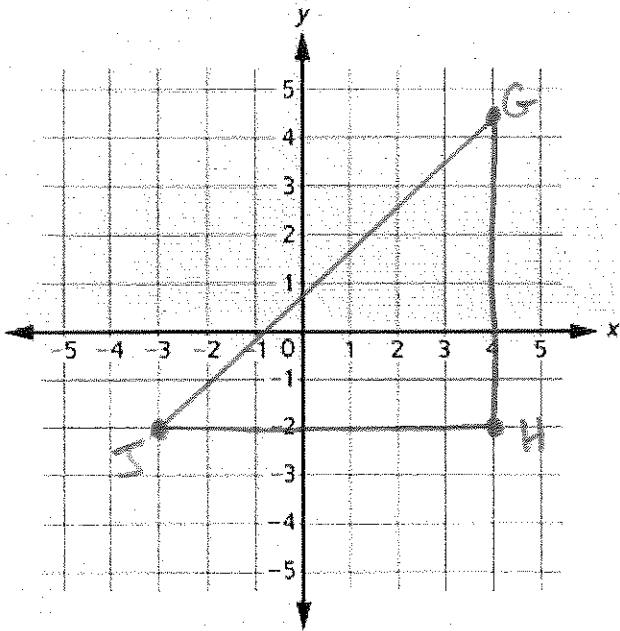
Name: Key #:

Parent Signature (test alert): _____

Test is on: _____

1.

Use paper and pencil to solve the problem.



~~Recreate the coordinate grid shown to the left.~~
~~Then~~ plot and label the points G, H, and J on the coordinate grid.
 Connect the points to make a triangle.

G: (4, 4.5) H: (4, -2) J: (-3, -2)

Write a number sentence for calculating the length of each line segment

Length of \overline{GH} : $|-2| + 4.5 = 6.5$

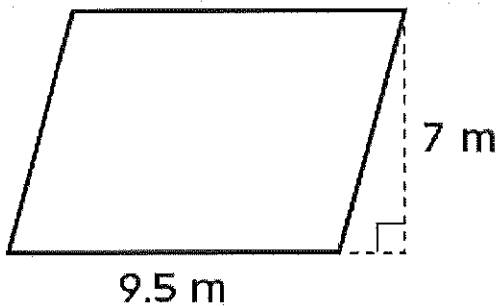
Length of \overline{HI} : $|-3| + 4 = 7$

2. Find the area of triangle GHI you created in the previous problem. 22.75 square units

$$a = \frac{1}{2}bh \quad \frac{1}{2}(7)(6.5) = 22.75$$

3.

Find the area of the parallelogram.



66.5 m²

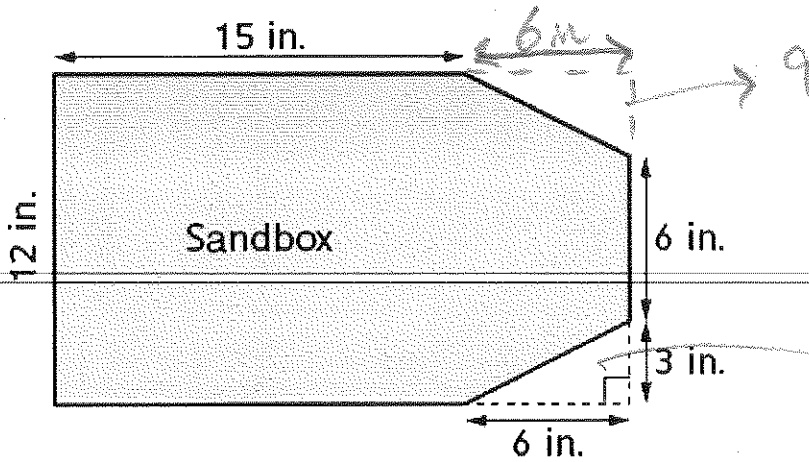
$$a = bh$$

$$a = 9.5 * 7$$

$$= 66.5$$

4.

Find the area of the sandbox play area in the park shown below.
Explain how you solved the problem.



Total Area:

$$a = 21 \times 12$$

$$= 252$$

$$- 18 (6 \times 3)$$

$$= 234$$

$$\frac{1}{2}(6)(3) = 9$$

Area of the sandbox play area:

$$234 \text{ m}^2$$

Explanation: I made one large rectangle and found the total area. I then subtracted the two triangles to form the original shape and area.

5.

a. Identify the units you might use when reporting surface area.

m² m³ m cm² cm³ cm yd² yd³ yd

b. Describe a common feature of these units for surface area. They will always be squared.

c. Explain why they have this feature in common.

They will always have this feature in common because you multiply two lengths together.

6.

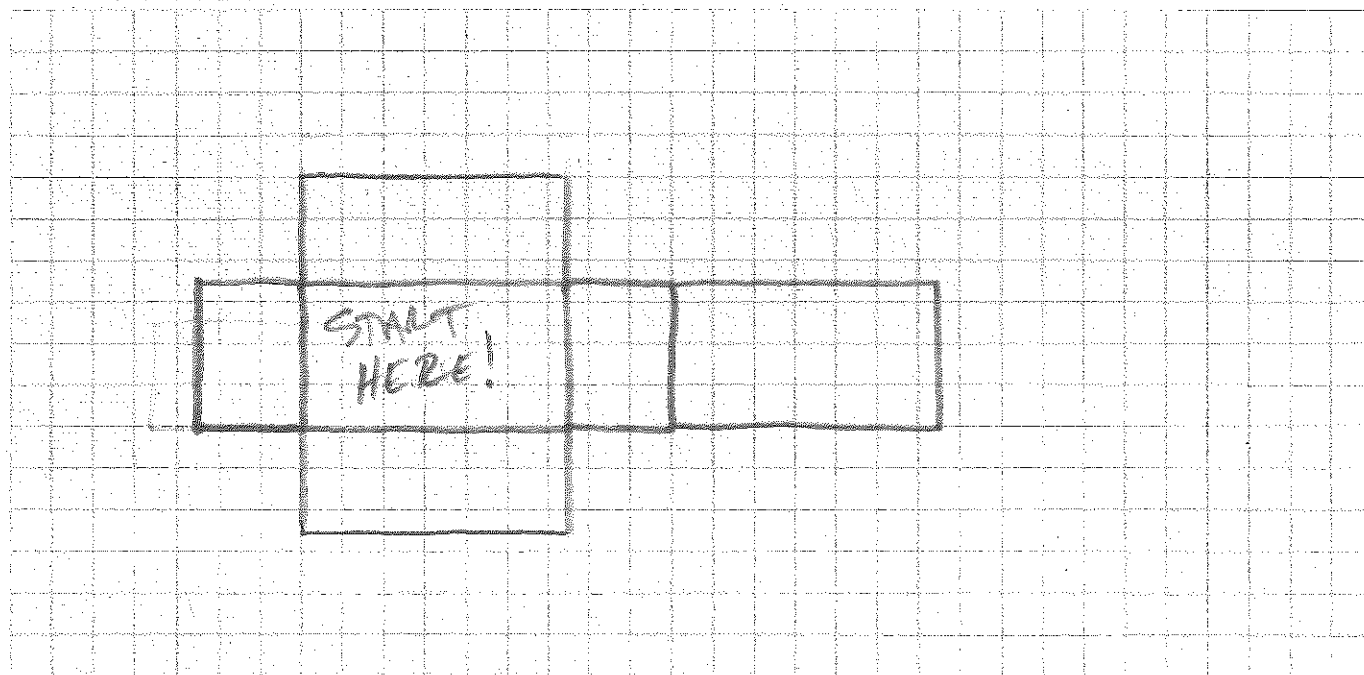
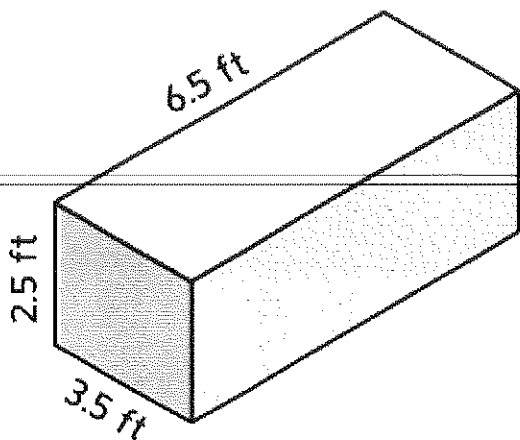
Identify the units you might use when reporting volume.

m² m³ m cm² cm³ cm yd² yd³ yd

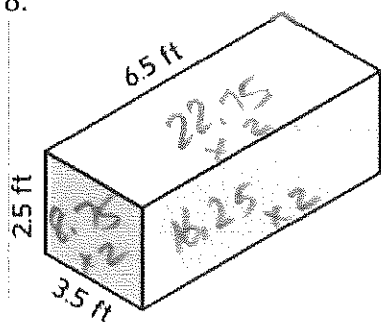
7.

Use paper and pencil to solve the problem.

Draw a net for the block in the picture.
The block is shaped like a rectangular prism.
Use the scale: 1 block = 1 ft^2



8.



Mrs. Washington painted all faces of the above block blue.

Explain how she could find the total surface area of the block she painted.

Then, find the surface area of the block.

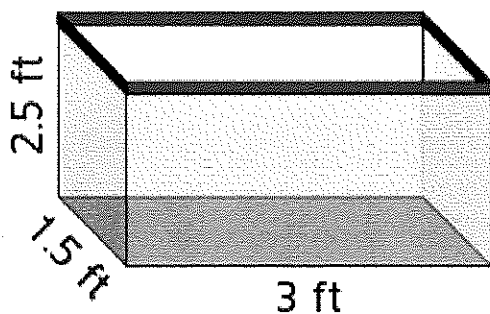
Explanation: She can find the area for each face of the block and add the areas.

$$32.5 + 17.5 + 45.5 = 95.5$$

Surface Area: 95.5 ft^2

9.

If the fish tank were filled to the top, how many cubic feet of water would it hold?



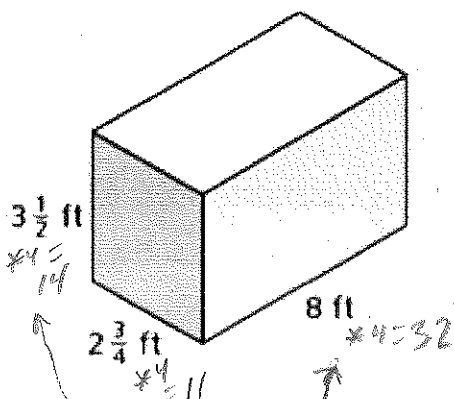
$$V = bwh$$

$$V = 3 * 1.5 * 2.5 = 11.25 \text{ ft}^3$$

Volume: ft^3

$$11.25 \text{ ft}^3$$

10.



a. What is the volume of the prism?

$$77 \text{ ft}^3$$

$$V = bwh$$

$$8 * 2.75 * 3.5 = 77 \text{ ft}^3$$

b. How many cubes with $\frac{1}{4}$ -foot side lengths will fit inside the prism if they are packed with no gaps?

$$4928 \text{ cubes}$$

$$14 * 11 * 32 = 4928$$