6th Grade Math Common Assessment Answer Key: Chapter 8 (15 Points)

Name: _____ Date _____

6.RP.3d

1.) Heather's desk is 3 feet long. About how long is it in meters? (1 point)

Use 1 foot ≈ 0.305 meter.

A. 0.00915 meter

B. 0.9015 meter

C. 0.915 meters

D. 9.15 meters

2.) Joan mails a package that weighs 140 grams. About how many ounces is the package? (1 point)

Use 1 ounce ≈ 28.4 grams.

A. 0.2 ounce

B. 4.9 ounces

C. 168.4 ounces

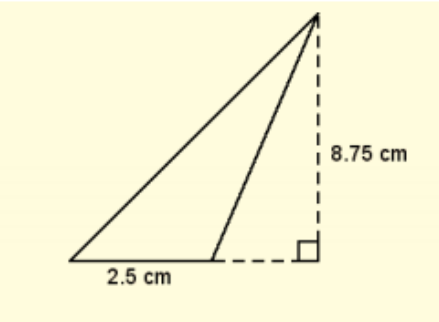
D. 403.3 ounces

6.G.1

3.) What is the area of the triangle in the figure below? (1 point)

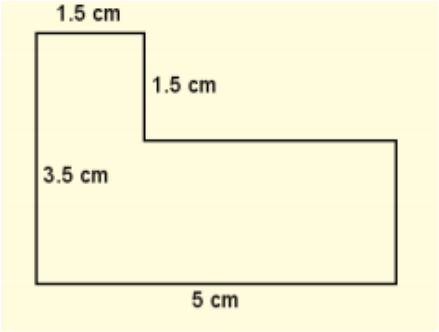
Use the formula $A = bh\frac{1}{2}$

$10.9375\ cm^2$



4.) Find the area of the polygon below by dividing it into two rectangles using one vertical line. Show your work. (1 point area, 2 points for reasonable work)

Area of left rectangle:
$A = (1.5)(3.5) = 5.25\ cm^2$
Area of right rectangle:
$A = (5 - 1.5)(3.5 - 1.5) = (3.5)(2) = 7\ cm^2$
Total area: $5.25\ cm^2 + 7\ cm^2 = 12.25\ cm^2$

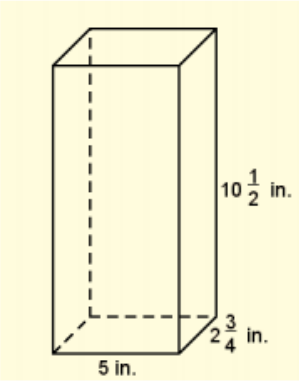


6.G.2

5.) What is the volume of the rectangular prism? (1 point)

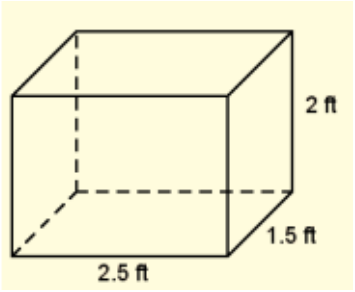
Use the formula $V = lwh$

$144\frac{3}{8}\ in^2$



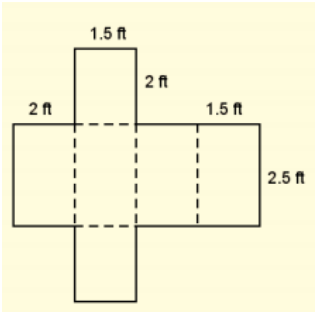
6.G.4

6.) An employee of a store's gift wrapping center is wrapping 8 gifts, each in the same size box. The dimensions of the box are shown below.



a. Draw a net for this box. (1point)

Possible net drawing.



b. Find the surface area of the box. Show your work. (1point surface area, 1 point reasonable work)

The area A of a rectangle is A = bh, where b is the base of the rectangle and h is the height. The area of each rectangle with side lengths 1.5 ft and 2 ft is $1.5 \times 2 = 3$ ft^2. Since there are two rectangles with these dimensions, the combined area is $2 \times 3 = 6$ ft^2. The area of each rectangle with side lengths 1.5 ft and 2.5 ft is $1.5 \times 2.5 = 3.75$ ft^2. The area of each rectangle with side lengths 2 ft and 2.5 ft is $2 \times 2.5 = 5$ ft^2. Since there are two rectangles of each type, the combined area is $2 \times 3.75 + 2 \times 5 = 17.5$ ft^2. So, the total surface area of the box is $6\ ft^2 + 17.5\ ft^2 = 23.5\ ft^2$

c. If there is only 160 square feet of wrapping paper left, will the employee be able to wrap all of the gifts? Explain. (1 point for answer, 1 point for explanation)

The employee needs to wrap 8 boxes, each with a surface area of 23.5 ft^2. So, the combined surface area needing to be wrapped is $8 \times 23.5 = 188$ ft^2. Since there is only 160 square feet of wrapping paper left, the employee will not be able to wrap all of the gifts.

6.G.5 Teachers this is a local standard added to the pacing guide. You will need to supplement.

7.) One circle has a 96 cm diameter and another circle has a 295.16 cm circumference. Which circle has a larger radius? Explain using 3.14 for π. (1 point for answer, 2 points for explanation)

The circle with the 96 cm diameter has a larger radius. The circle with a 96 cm diameter has a 96 ÷ 2 = 48 cm radius. Use the formula for the circumference of a circle to find the radius of the circle that has a 295.16 cm circumference.

$C = 2\pi r$

$295.16 = 2\pi r$

$295.16 \approx 2 \bullet 3.14 \bullet r$

$295.16 \approx 6.28 \bullet r$

295.16

$6.28 \approx 6.28r$

6.28

$47 \approx r$

The radius of this circle is about 47 cm. So, the circle with the 48cm radius is the bigger circle.