

9.5 Pop Quiz: Unit conversions, area

CCSS

1. How many pounds is 48 ounces?

$$48 \text{ oz} \cdot \frac{1 \text{ lb}}{16 \text{ oz}} = 3 \text{ lbs}$$

2. How many feet is 144 inches?

$$144 \text{ in} \times \frac{1 \text{ ft}}{12 \text{ inches}} = 12 \text{ ft}$$

3. How many quarts of milk could be poured from a five gallon canister?

$$5 \text{ gal} \times \frac{4 \text{ qts}}{1 \text{ gallon}} = 20 \text{ qts}$$

4. Convert 5 miles to feet.

$$5 \text{ mi} \times \frac{5280 \text{ ft}}{1 \text{ mi}} = 26,400 \text{ ft}$$

5. What is the volume of a cube that is 18 inches on a side in terms of cubic feet?

$$18 \text{ inches} = 1.5 \text{ ft}$$

$$1.5^3 = 3.375 \text{ ft}^3$$

6. If a gallon of paint would cover 80 square feet, how many gallons would be required to paint a wall twenty feet long by eight feet high?

$$A = 20 \times 8 = 160 \text{ ft}^2$$

$$160 \text{ ft}^2 \times \frac{1 \text{ gal}}{80 \text{ ft}^2} = 2 \text{ gallons}$$

7. Find the area of a triangle with a base of 4 inches and height of 6 inches.

$$A = \frac{1}{2}(4)(6) = 12 \text{ in}^2$$

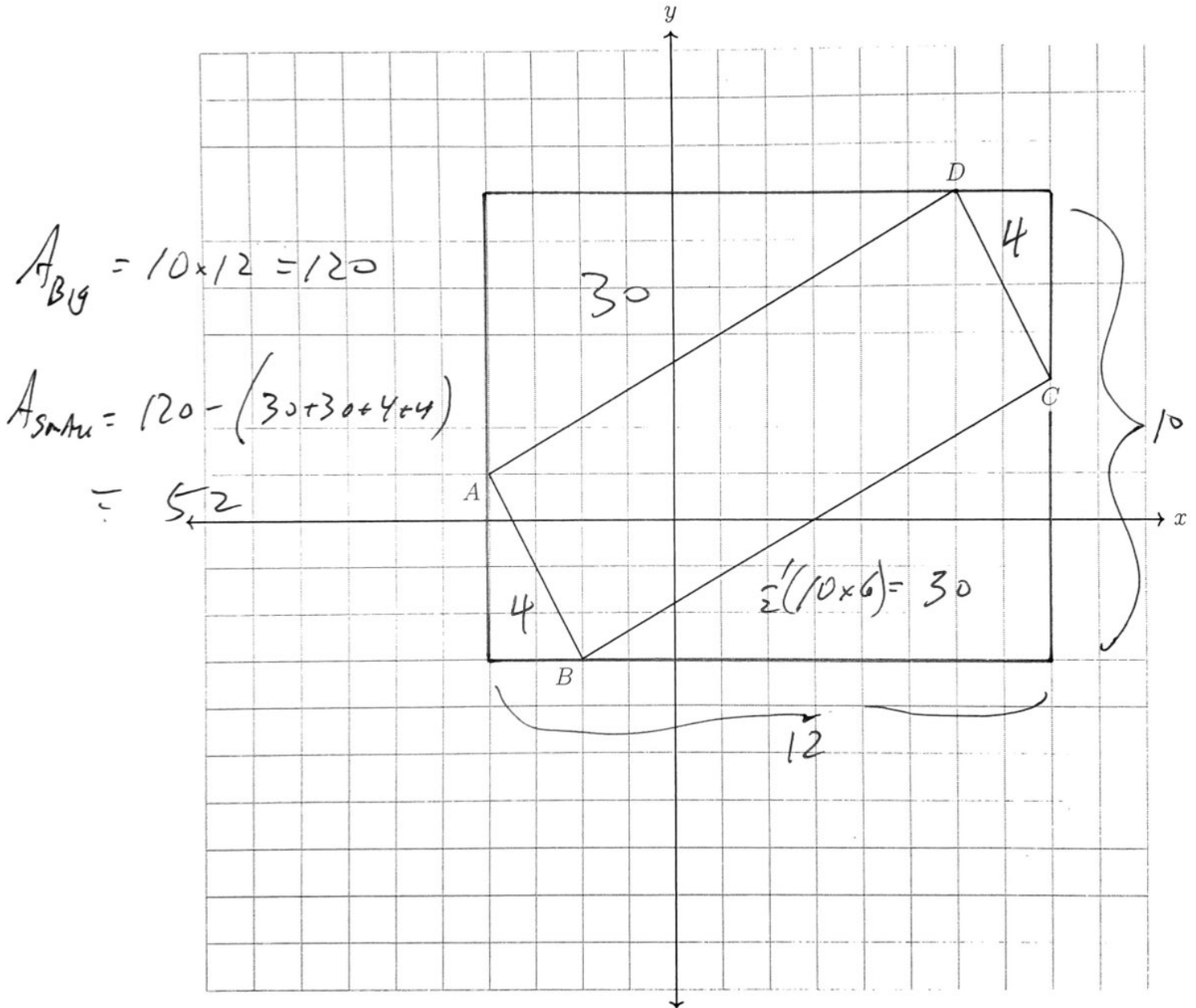
8. What is the area of a circle with a 7 centimeter radius, to the nearest tenth of a square centimeter.

$$A = \pi 7^2$$

$$= 153.93804 \dots$$

$$\approx 153.9 \text{ cm}^2$$

19. Find the area of the quadrilateral shown.



Is $ABCD$ a rectangle? Calculate the slopes of the four sides.

$$m_{AB} = -\frac{4}{2} = -2$$

$$m_{CD} = -\frac{4}{2}$$

$$m_{AD} = \frac{6}{10} = \frac{3}{5}$$

$$m_{BC} = \frac{6}{10}$$

$$(-2)\left(\frac{3}{5}\right) = -\frac{6}{5} \neq -1$$

$$\Rightarrow \overline{AB} \nparallel \overline{CD}$$

Not a rectangle because
vertex is not 90° right angle