

Unit 2B Study Guide

Solve each inequality for the variable given.

1.  $-2w < -18$   $w > 9$

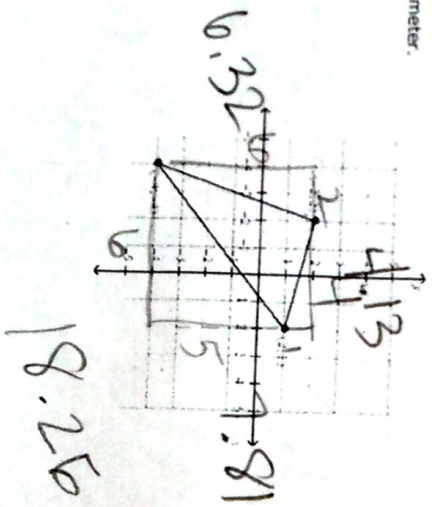
2.  $a + 8 - 2(a - 12) > 0$   $a + 8 - 2a + 24 > 0$   $-a > -32$   $a < 32$

3.  $5(x - 2) + 2x > 5x$   $5x - 10 + 2x > 5x$   $2x > 10$   $x > 5$

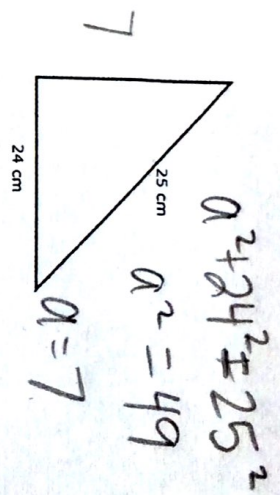
4. Suppose it cost \$5 to enter a carnival. Each ride costs \$1.25. You have \$15 to spend at the carnival. What is the greatest number of rides that you can go on?  
 $1.25x + 5 \leq 15$

5. The low temperatures for the previous two days were  $62^\circ$  and  $58^\circ$ . What would the temperature need to be for the third day such that the average daily temperature is at least  $64^\circ$ .  
 $\frac{62 + 58 + x}{3} \geq 64$   $x \geq 72$

6. Manuel is taking a job translating English instruction manuals to Spanish. He will receive \$15 per page plus \$100 per month. He'd like to work for 3 months during the summer and make at least \$1,500. Write an inequality and find the minimum number of pages Manuel must translate in order to reach his goal.  
 $x \geq 80 \text{ pages}$



Find the missing side.

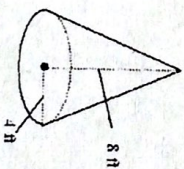


9. Does a triangle with the sides 4 cm, 5cm, and 9 cm form a right triangle?  
NO

$4^2 + 5^2 \neq 9^2$

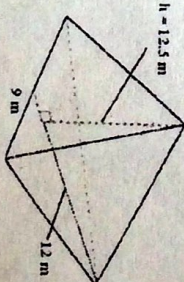
10. A cylindrical container of Pringles has a diameter of 5 in and a height of 10 in. Find the volume of the container.  
 $\pi 2.5^2 \cdot 10$

11. A. Find the Volume.



$134.04$

B. Find the Volume.



$225$

12. Determine the volume of a sphere with a radius of 5 cm, both in terms of pi and to the nearest tenth. Use 3.14 for pi.

$523.3$

$\frac{4}{3} \pi r^3$

$\frac{4}{3} \pi 5^3$

Solve for the given variable.

13.  $12x - 4y = 20$ ; for y

$y = 3x - 5$

14.  $A = \frac{bh}{2}$ ; for h

$\frac{2A}{b} = h$

15.  $S = \frac{u+V}{t}$ ; for v

$St - u = v$