

Quiz 3  
Math 95-(4.2,4.3)

1) Write in interval notation the solution for the compound inequality:

a)  $3 < y < 8$

$y > 3$  and  $y < 8$



intersection



interval notation:  $(3, 8)$

100

2) Write in interval notation the solution for the compound inequality:

a)  $x > -2$  or  $y < 3$

$x > -2$  or  $x < 3$



union



interval notation:  $(-\infty, \infty)$

100

Find All solutions for the following absolute value equations:

$$3) |2y| - 5 = 13$$

$$|2y| = 18 \Rightarrow \begin{array}{l} 2y = 18 \quad \text{or} \quad 2y = -18 \\ \boxed{y = 9} \quad \text{or} \quad \boxed{y = -9} \end{array}$$

Solution set

$$\rightarrow \{9, -9\}$$

1/8

$$4) |7-a| = |a+5|$$

$$\begin{array}{l} 7-a = |a+5| \Rightarrow \begin{array}{l} 7-a = a+5 \quad \text{or} \quad 7-a = -(a+5) \\ -2a = -2 \quad \text{or} \quad 7 = -5 \\ a = 1 \quad \quad \quad \text{FALSE} \end{array} \end{array}$$

one solution  $\{a = 1\}$

1/8

Find all solutions for the following absolute value inequality

$$5) |x| < 0$$

No solution absolute values can never be less than zero.

1/8