

1.(1 pt) Evaluate the expression  $|22|$ .

2.(1 pt) Evaluate the expression  $|-198|$ .

3.(1 pt) Evaluate the expression  $|147 - 264|$ .

4.(1 pt) Evaluate the expression  $\frac{|139-345|}{|-14|}$ . Give you answer in decimal notation correct to three decimal places or give your answer as a fraction.

[NOTE: Your answer can be an algebraic expression. Make sure to include all necessary (, .) ]

5.(1 pt) Find the distance between 339 and 285.

[NOTE: Your answer can be an algebraic expression]

6.(1 pt) Match the statements defined below with the letters labeling their equivalent expressions.

You must get all of the answers correct to receive credit.

- 1.  $|x - 4| = 9$
- 2.  $|x - 4| \geq 9$
- 3.  $|x - 4| \leq 9$
- 4.  $|x - 4| < 9$
- 5.  $|x - 4| > 9$
- A.  $x \in \{-5, 13\}$
- B.  $x \in (-5, 13)$
- C.  $x \in (-\infty, -5) \cup (13, \infty)$
- D.  $x \in (-\infty, -5] \cup [13, \infty)$
- E.  $x \in [-5, 13]$

7.(1 pt) To say that  $|x - 8| \leq 5$  is the same as saying  $x$  is in the closed interval  $[A, B]$

where  $A$  is: \_\_\_\_\_  
and where  $B$  is: \_\_\_\_\_

8.(1 pt) To say that  $|x + 5| \leq 6$  is the same as saying  $x$  is in the closed interval  $[A, B]$  where  $A$  is: \_\_\_\_\_  
and where  $B$  is: \_\_\_\_\_

9.(1 pt) To say that  $|\frac{x-5}{3}| \leq 5$  is the same as saying  $x$  is in the closed interval  $[A, B]$   
where  $A$  is: \_\_\_\_\_  
and where  $B$  is: \_\_\_\_\_

10.(1 pt) To say that  $|\frac{x-7}{5}| \leq 2$  is the same as saying  $x$  is in the closed interval  $[A, B]$   
where  $A$  is: \_\_\_\_\_  
and where  $B$  is: \_\_\_\_\_

11.(1 pt) Evaluate the expression  $| - (-28 - 167) |$ .

12.(1 pt) The interval described in set-builder notation by the inequality  $|5x - 25| < 25$  has interval notation  $(a, b)$   
for:  
a= \_\_\_\_\_  
and  
b= \_\_\_\_\_

13.(1 pt) Let  $S$  be the union of the two intervals  $(-\infty, 7]$  and  $[13, \infty)$ .  
Then  $S$  can also be described in set-builder notation by the inequality  $|x - a| \geq b$   
for:  
a= \_\_\_\_\_  
and  
b= \_\_\_\_\_