Algebra 2 Unit #1 Worksheet #5

Inequalities and Interval Notation

Change the following statements from statements of inequalities to interval notation:

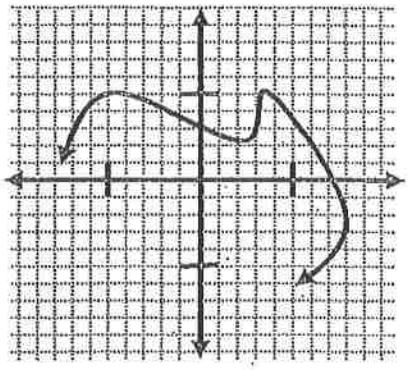
1. $x > 3$ 2. $y < -9$ 3. $3 \le x \le 12$ 4. $y \le 5$ or $y > 200$

Change the following statements from interval notation to statements of inequalities using the variable x:

5. $[2, 18)$ 6. $(-\infty, 11]$ 7. $[4,4] \cup [6, \infty)$ 8. $[3, 3]$

Each of the following has AT LEAST one incorrect statement about domain and/or range. Change the domain and/or range so that they are correct. Write corrected answers using **INEQUALITIES AND INTERVAL NOTATION.**

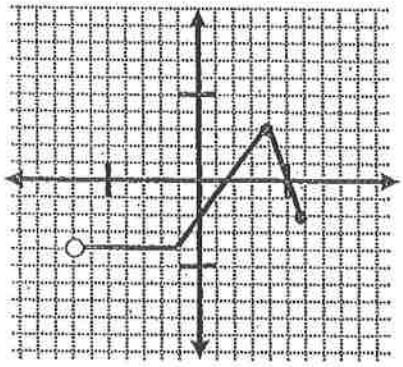
9.



Domain: All Real Numbers

Range: $y \le 5$

10.



Domain: $-7 < y \le 6$

Range: $-4 < y \le -2$

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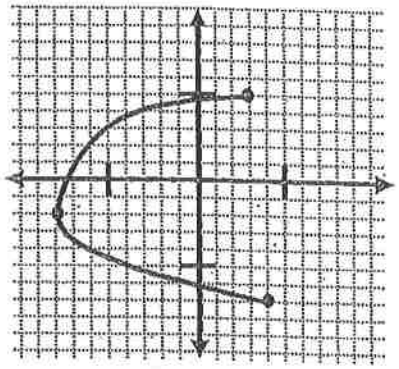
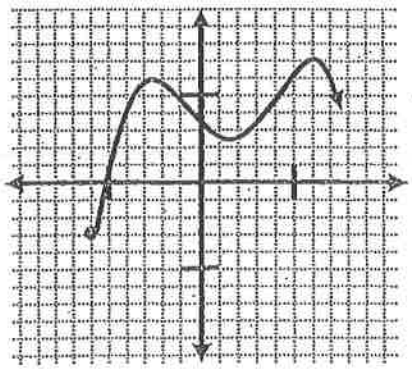


Domain: $-8 \le x \le 4$

Range: All Real Numbers

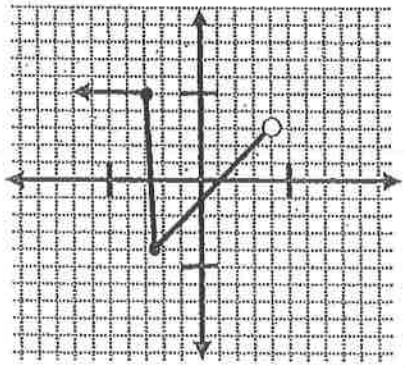
12.



Domain: $x \ge -6$

Range: $-3 \le y \le 7$

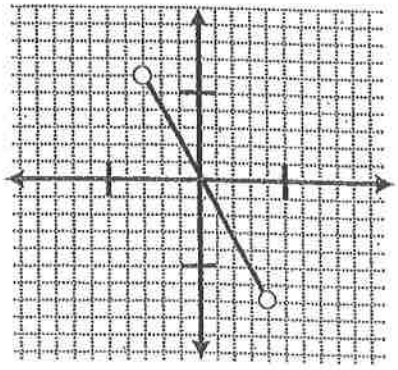
13.



Domain: $x \le 4$

Range: $-4 \le y \le 5$

14.



Domain: $-7 < x < 6$

Range: $-3 < y < 4$

Algebra 2 Unit #1 Worksheet #7

I. Draw the following inequalities on the number line.

1. $x < 3$

2. $2 \leq x < 3$

3. $x \geq 4$

4. $x < 3$ or $x \geq 9$

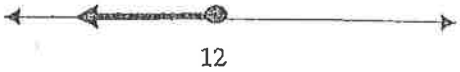
II. Describe the following inequalities on the number line using both statements of inequalities and interval notation:

5.

Inequality: _____

Interval: _____

6.



Inequality: _____

Interval: _____

7.

Inequality: _____

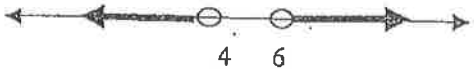
Interval: _____

8.

Inequality: _____

Interval: _____

9.



Inequality: _____

Interval: _____

10.

Inequality: _____

Interval: _____

III. Change the following statements from statements of inequalities to interval notation:

11. $x < -2$

12. $-1 \leq x \leq 5$

13. $y > 3$

14. $y < 4$ or $y > 10$

IV. Change the following statements from interval notation to statements of inequalities using the variable x:

15. $(-\infty; 11]$

16. $[2, 18)$

17. $(-1.2, \infty)$

18. $[4,4]$ and $[6, \infty)$

What Did the Baby Porcupine Say When It Backed Into a Cactus?

Determine which of the relations below are functions. Find the number of each relation that *is* a function at the bottom of the page and cross out the letter below it. When you finish, the answer to the title question will remain.

1. $\{(-2, 7), (-1, 5), (0, 3), (1, 1), (2, 1)\}$
2. $\{(-7, 20), (3, 5), (0, 5), (-2, 0), (6, -4), (-6, -9), (4, 4)\}$
3. $\{(4, 8), (-3, -2), (9, 6), (2, -1), (-4, -5), (2, 7), (-8, 0)\}$

4.

x	y
0	−19
1	−12
2	−4
3	3
4	13
5	27

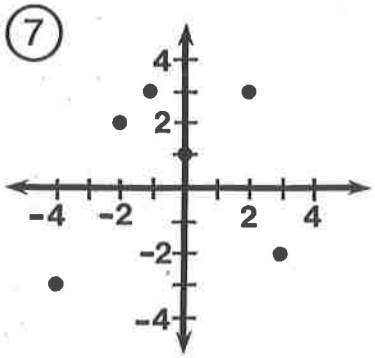
5.

x	y
−5	8
−3	8
−1	−2
1	−2
3	11
5	23

6.

x	y
−2	−7
−2	5
0	−16
2	0
2	6

7.



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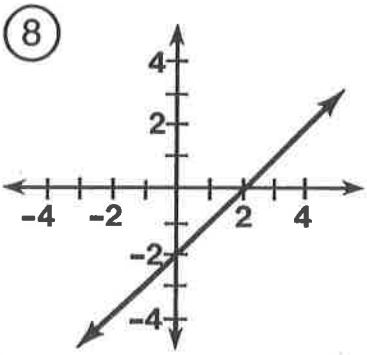

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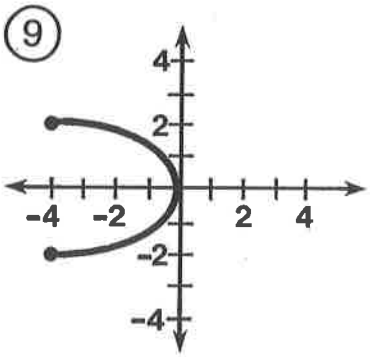

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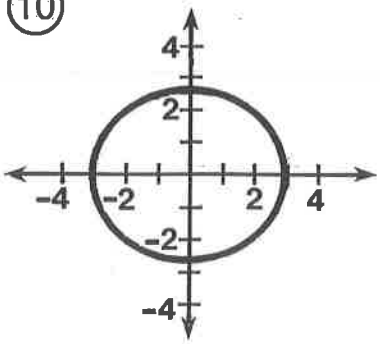

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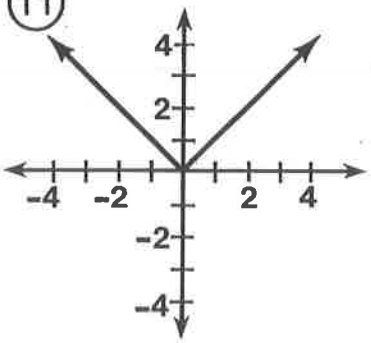

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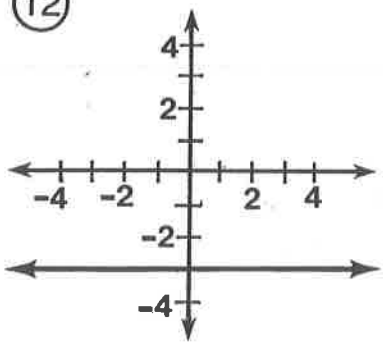
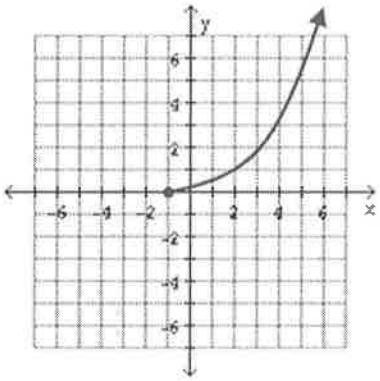
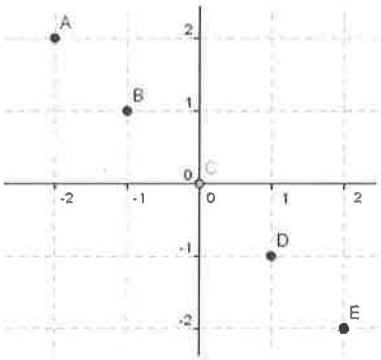
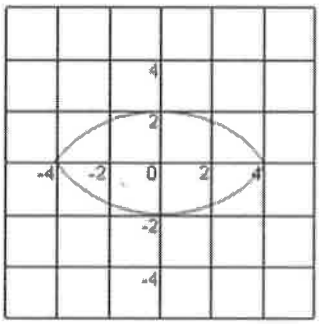


Math 10C
Exit Slip
Domain and Range

State, in mathematical notation, the domain and range of each of the following relations.







Math 10C
Exit Slip
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State, in mathematical notation, the domain and range of each of the following relations.