

ALGEBRA

Name: _____

Relations and Functions

Period: _____

Is each relation a function? Use a mapping diagram. Explain your answer.

1. $\{(4, 7), (9, 11), (4, 6), (10, 2)\}$

2. $\{(-5, -8), (2, 4), (3, 4), (-6, -8)\}$

Is it a function? _____

Is it a function? _____

Explain:

Explain:

Identify which of the following graphs are NOT functions.

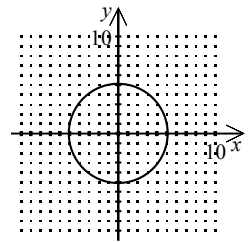
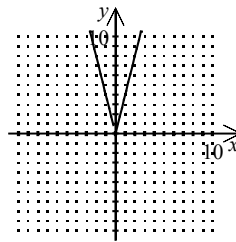
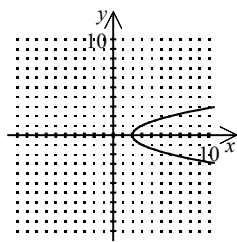
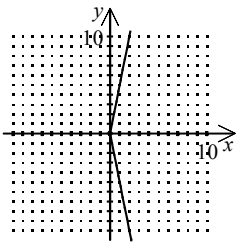
Answer(s): _____ . (there may be more than one!)

3. [A]

[B]

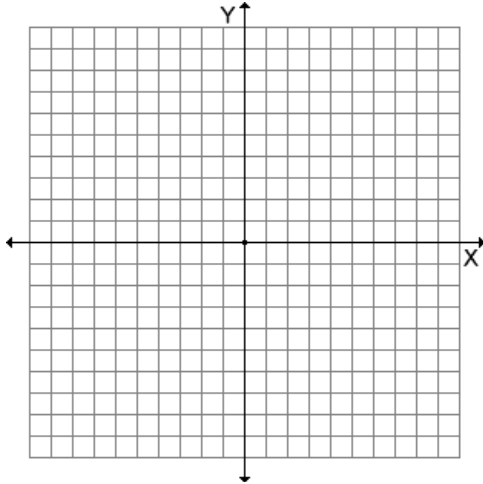
[C]

[D]

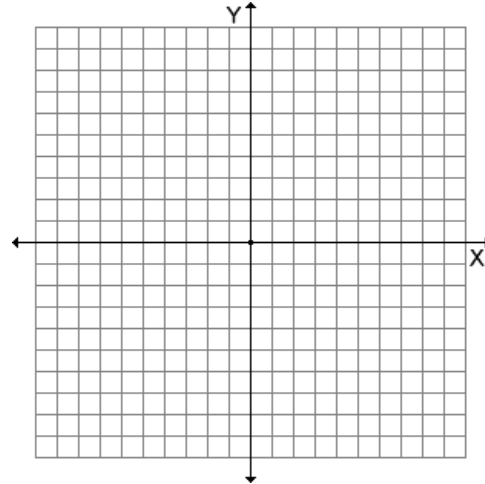


Is each relation a function? Use the vertical line test. Explain your answer.

4. $\{(2, 5), (-3, 5), (0, 5), (3, 5)\}$

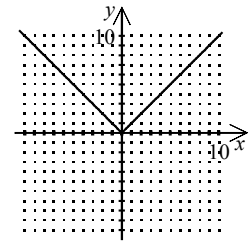


5. $\{(-1, -9), (1, 3), (-1, 9), (6, 6)\}$



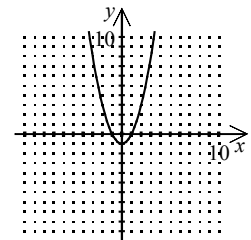
6. The function to the right is called:

- A. a quadratic function
- B. a V function
- C. an absolute value function
- D. a linear function



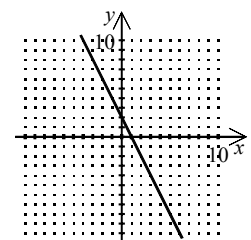
7. The function to the right is called:

- E. a quadratic function
- F. a linear function
- G. an absolute value function
- H. a U function



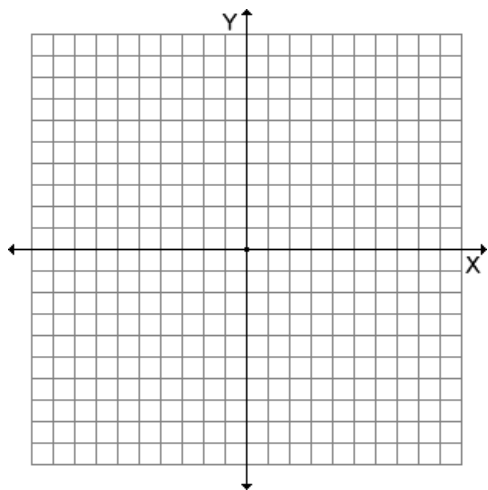
8. The function to the right is called:

- I. an absolute value function
- J. a slant function
- K. a quadratic function
- L. a linear function



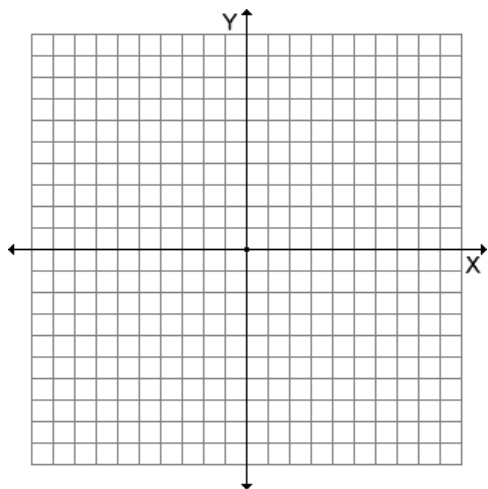
Graph each equation using a table and a graph.

9. $f(x) = -2x - 1$



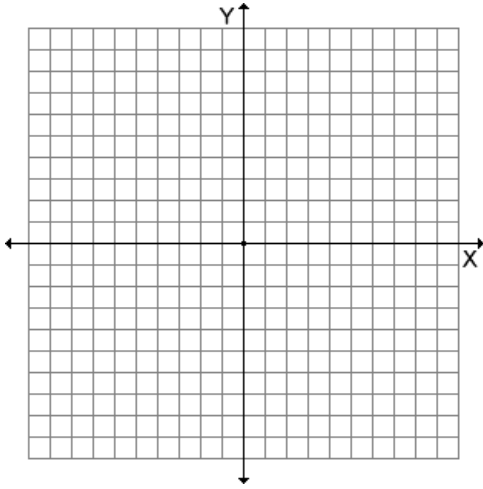
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10. $y = -x + 4$

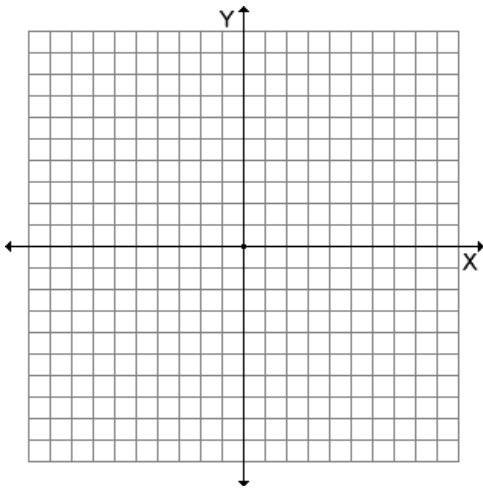


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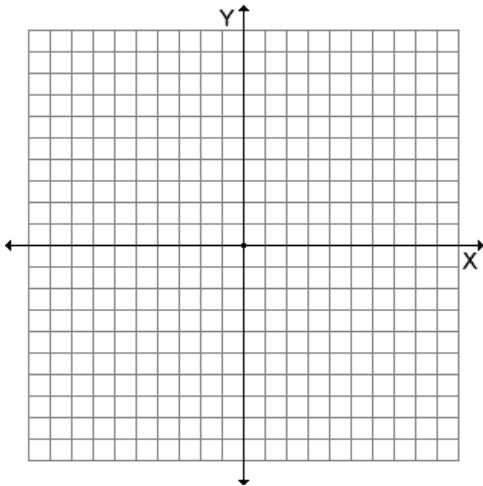
11. $f(x) = x^2 - 5$



12. $f(x) = -x^2 + 6$

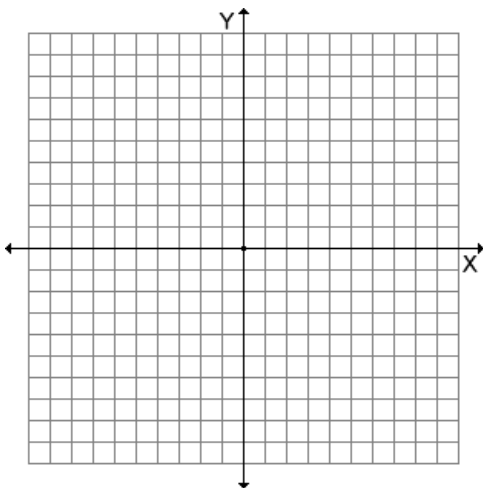


13. $y = |x| + 3$



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14. $y = -|x| - 2$



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15. $f(x) = \frac{1}{3}x - 2$

