
Worksheet 13-3

Pre-Algebra **Linear and Non-linear** **Unit 13**

Determine whether the following equations are linear or non-linear.

1. $y = 2x + 5$

5. $y = x$

9. $y = |x| + 10$

2. $y = x^2 + 1$

6. $y = |2x + 1|$

10. $y = \frac{1}{2}x - 3$

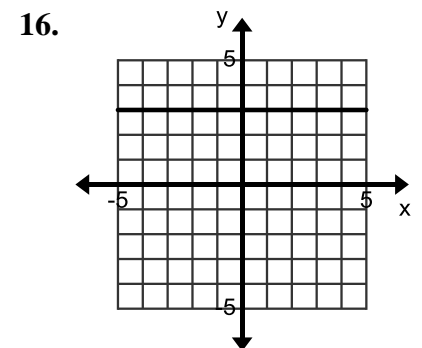
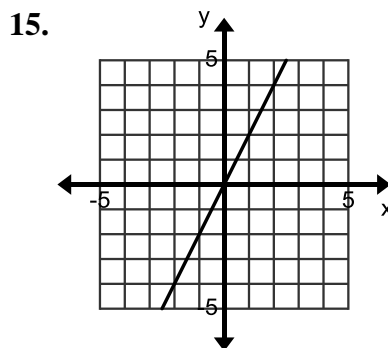
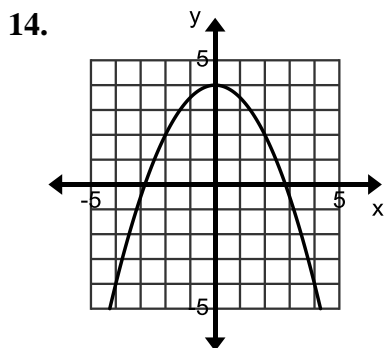
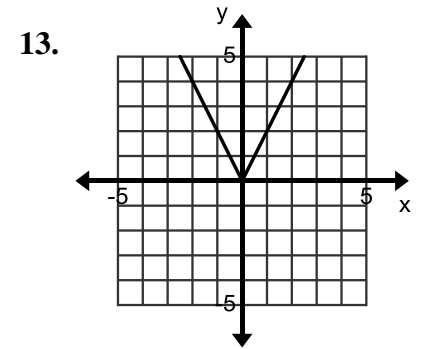
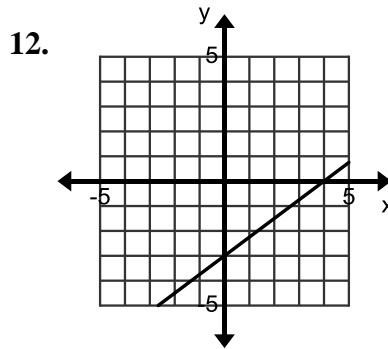
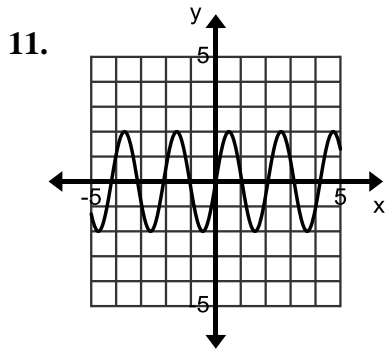
3. $y = \frac{x}{3} - 2$

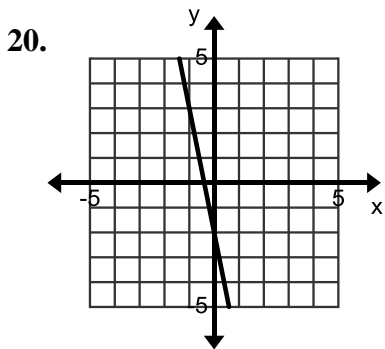
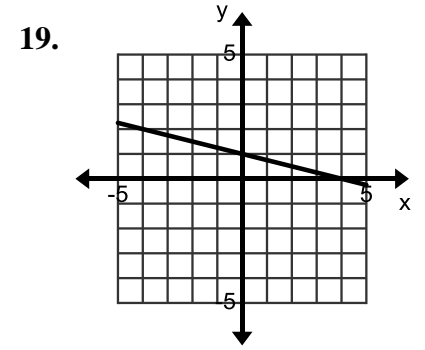
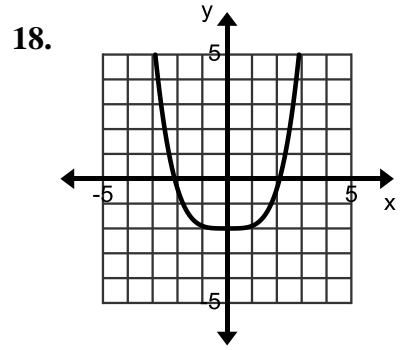
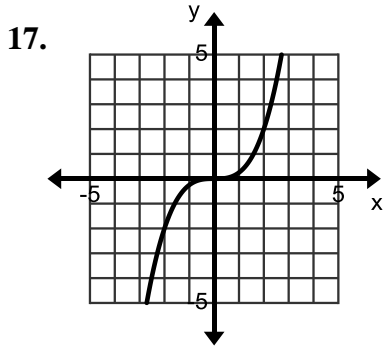
7. $y = \frac{x^2}{2}$

4. $y = 0.4x^4 - 4$

8. $y = 4x$

Determine whether the following graphs are linear or non-linear.





21. Determine which table matches the equation $y = x + 5$.

A

X	Y
-1	-4
0	-5
1	-6

B

X	Y
-2	3
0	5
1	6

C

X	Y
-1	-4
-3	2
2	7

D

X	Y
3	8
-5	0
-7	-2

22. Determine which table matches the equation $y = 3x + 1$.

A

X	Y
-1	4
0	1
1	2

B

X	Y
2	7
1	4
0	-1

C

X	Y
-2	-5
-1	-2
5	16

D

X	Y
-3	8
-1	2
1	5

Determine if each point is a solution to the equation, write YES (if it is a solution) or NO (if it is not).

23. $y = 5x + 5$

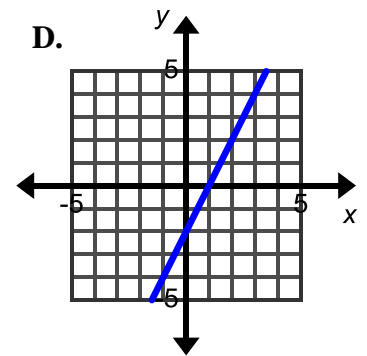
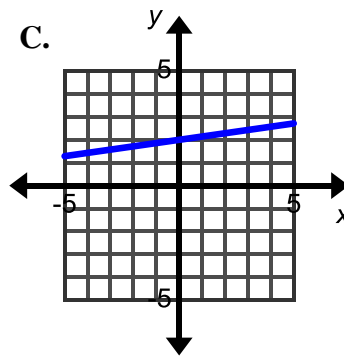
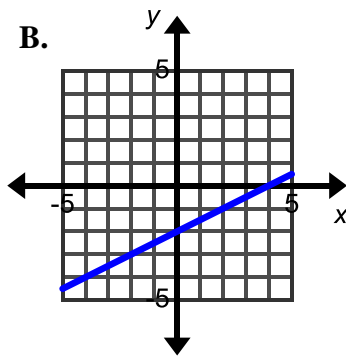
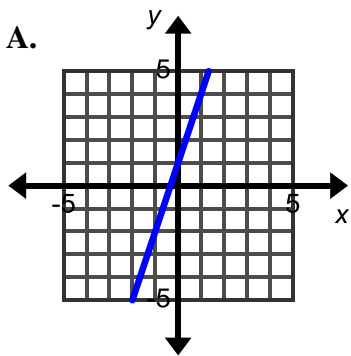
- A. $(5, 5)$
- B. $(-1, 0)$
- C. $(2, 10)$
- D. $(1, 5)$

24. $y = 6x - 4$

- A. $(2, 5)$
- B. $(1, 2)$
- C. $(0, -4)$
- D. $(-1, 2)$

Multiple Choice:

25. Which of the following graphs contains a line with a solution of $(3, 4)$?



26. Which of the following graphs contains a line with a solution of $(-1, -2)$?

