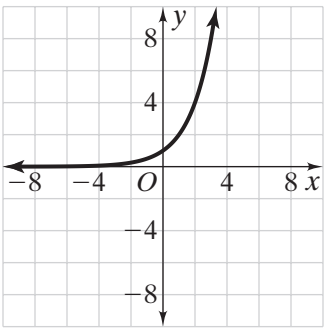
Name _____ Class _____ Date _____

Practice 3-5

Nonlinear Functions

Identify each function as linear or nonlinear.

1.



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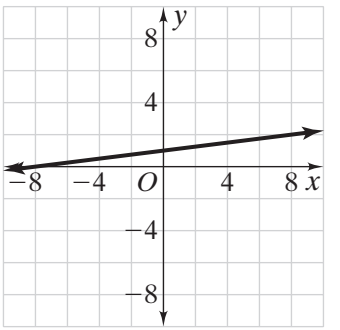
2.



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Circle the function in each pair that is nonlinear.

3. $y = 2x$

$y = x^2 - 4x + 6$

4. $y = 2x^3 + 7x - 1$

$y = 5x + 3$

5. $y = 2(x - 3.5)$

$y = 0.6x^4 + 2$

6. $y = \frac{2}{5}x^5 - 4x^3 + 5$

$y = \frac{3}{5}x - 5 + \frac{2}{5}x$

7. $y = 4^x$

$y = 4x - 1 + 2x$

8. $y = 2.4(5 - x)$

$y = 3 + 5x - 2x^2$

9.

x	1	6	11	17
y	21	−2	−6−	−10

x	−3	−1	1	3
y	6	5	4	3

10.

x	−2	−3	−4	−5
y	20	23	26	29

x	4	8	12	16
y	5	10	20	40

Determine if the function described is linear or nonlinear. Explain.

11. Physics Gravity causes an object to fall from a tall building. A function relates the object's speed while falling and time. _____

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12. Transportation A train is traveling at a rate of 80 mi/hr. A function relates the distance the train has traveled to its rate of speed.

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