

A) Determine whether each function is linear or nonlinear.

1)  $2x(5 + x) = y$

2)  $y = 7x + 15$

3)  $\frac{x}{y} = 8$

4)  $6y = x^2 + 12$

5)  $5x + 4y = 0$

7)  $y = \frac{x^4}{8}$

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B) 1) Which of the following is a nonlinear function?

i)  $x^2 + 2y = \frac{5}{3}$

ii)  $y = 7(x + 4)$

iii)  $y = -6x - 9$

iv)  $12 + \frac{x}{3} = y$

2) Which of the following is a linear function?

i)  $y = 8x^3 - 15$

ii)  $x = 10y^4 + 14$

iii)  $y = \frac{x}{7} + 11$

iv)  $y - 2x^5 = 0$

## Linear or Nonlinear Functions

A) Determine whether each function is linear or nonlinear.

1)  $2x(5 + x) = y$

2)  $y = 7x + 15$

\_\_\_\_\_ **nonlinear** \_\_\_\_\_

\_\_\_\_\_ **linear** \_\_\_\_\_

3)  $\frac{x}{y} = 8$

4)  $6y = x^2 + 12$

\_\_\_\_\_ **linear** \_\_\_\_\_

\_\_\_\_\_ **ar** \_\_\_\_\_

5)  $5x + 4y = 0$

\_\_\_\_\_ **linear** \_\_\_\_\_

\_\_\_\_\_ **ar** \_\_\_\_\_

7)  $y = \frac{x^4}{8}$

\_\_\_\_\_ **nonlinear** \_\_\_\_\_

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