

Name _____

Date _____

$$6) 7x^2 + 2x - 5 = 39$$

Identify by inspection whether the given equation is a linear equation in one variable. Explain your answer.

$$1) 4x + 10 = 6$$

$$7) \frac{3}{x} + 12x = 4$$

$$2) 4x^2 + 3x - 2 = 13$$

$$8) -140x + 110y = 25$$

$$3) 8x^2 + 3x - 7 = 61$$

$$9) \frac{9}{x} + 54x = 6$$

$$4) 3(x - 3) + 7x - 3 = 27$$

$$10) -50x + 40y = 9$$

$$5) 6(x - 5) + 2x - 4 = 36$$

Determine if the given value is a solution to the linear equation.

11) $5m + 7 = 44$, $m = 7$

12) $7m + 7 = 72$, $m = 9$

13) $4m + 2 = 12$, $m = 2$

14) $4y + 3(y - 4) = 51$, $y = 9$

15) $7y + 4(y - 3) = 76$, $y = 8$

16) $8x + 3(3x - 6) = 6 - 7x$, $x = 1$

17) $\frac{1}{3}x + 2 = \frac{1}{6}x + \frac{4}{3}$, $x = -12$

18) $0.03y + 0.13(400 - y) = 0.15y$, $y = 208$

19) $6y + 5(y - 5) = 63$, $y = 8$

20) $-4x + 6(-3x - 3) = -34 - 6x$, $x = 1$

21) $\frac{1}{5}x + \frac{6}{5} = \frac{1}{7}x + \frac{8}{7}$, $x = -2$

22) $0.08y + 0.12(200 - y) = 0.21y$, $y = 96$

Answer Key

Testname: 016ALGEBRAWS04V02

- 1) Yes. This is a linear equation in one variable because the exponent on x is positive 1.
- 2) No. This is not a linear equation in one variable because the highest power of x is 2.
- 3) No. This is not a linear equation in one variable because the highest power of x is 2.
- 4) Yes. This is a linear equation in one variable because the highest power of x is 1.
- 5) Yes. This is a linear equation in one variable because the highest power of x is 1.
- 6) No. This is not a linear equation in one variable because the highest power of x is 2.
- 7) No. This is not a linear equation in one variable because there is an x in the denominator.
- 8) No. This is not a linear equation in one variable because the equation contains both x and y.
- 9) No. This is not a linear equation in one variable because there is an x in the denominator.
- 10) No. This is not a linear equation in one variable because the equation contains both x and y.
- 11) No
- 12) No
- 13) No
- 14) Yes
- 15) Yes
- 16) Yes
- 17) No
- 18) Yes
- 19) Yes
- 20) Yes
- 21) No
- 22) Yes