

HW 16

$$7. a) 5(0) - 3 = 3(0) + 5$$

$$-3 = 5 \text{ X}$$

$$b) 5(-5) - 3 = 3(-5) + 5$$

$$-25 - 3 = -15 + 5$$

$$-28 = -10 \text{ X}$$

$$c) 5(4) - 3 = 3(4) + 5$$

$$20 - 3 = 12 + 5$$

$$17 = 17 \checkmark$$

$$d) 5(10) - 3 = 3(10) + 5$$

$$50 - 3 = 30 + 5$$

$$47 = 35 \text{ X}$$

$$13. a) 3 + \frac{1}{-1+2} = 4$$

$$3 + \frac{1}{1} = 4 \checkmark$$

$$b) 3 + \frac{1}{-2+2} = 4$$

$$3 + \frac{1}{0} = 4 \text{ X}$$

$$15. a) \sqrt{3(3)-2} = 4$$

$$\sqrt{7} = 4 \text{ X}$$

$$b) \sqrt{3(2)-2} = 4$$

$$\sqrt{4} = 4 \text{ X}$$

$$9. a) 3(-3)^2 + 2(-3) - 5 = 2(-3)^2 - 2$$

$$27 - 6 - 5 = 18 - 2$$

$$16 = 16 \checkmark$$

$$b) 3(1)^2 + 2(1) - 5 = 2(1)^2 - 2$$

$$3 + 2 - 5 = 2 - 2$$

$$0 = 0 \checkmark$$

$$17. a) 6\left(\frac{-5}{3}\right)^2 - 11\left(\frac{-5}{3}\right) - 35 = 0$$

$$6\left(\frac{25}{9}\right) + \frac{55}{3} - 35 = 0$$

$$0 = 0 \checkmark$$

$$b) 6\left(\frac{-2}{7}\right)^2 - 11\left(\frac{-2}{7}\right) - 35 = 0$$

$$6\left(\frac{4}{49}\right) + \frac{22}{7} - 35 = 0$$

$$-32 = 0 \text{ X}$$

$$11. a) \frac{5}{2(-1/2)} - \frac{4}{-1/2} = 3$$

$$\frac{5}{-1} + 8 = 3$$

$$-5 + 8 = 3 \checkmark$$

$$b) \frac{5}{2(4)} - \frac{4}{4} = 3$$

$$\frac{5}{8} - 1 = 3 \text{ X}$$

19. identity

20. conditional

21. conditional

22. identity

23. identity

$$34. \quad 7-x=19$$

$$-x=12$$

$$\boxed{x=-12}$$

$$7-(-12)=19$$

$$19=19 \checkmark$$

$$36. \quad 7x+2=23$$

$$7x=21$$

$$\boxed{x=3}$$

$$7(3)+2=23$$

$$21+2=23 \checkmark$$

$$38. \quad 5x+3=6-2x$$

$$7x=3$$

$$\boxed{x=3/7}$$

$$40. \quad 5y+1=8y-5+6y$$

$$5y+1=14y-5$$

$$6=9y$$

$$6/9=y$$

$$\boxed{2/3=y}$$

$$42. \quad 9x-10=5x+4x-10$$

$$9x-10=9x-10$$

$\boxed{\text{infinite solutions}}$

$$44. \quad \left(\frac{x}{5} - \frac{x}{2} = 3 + \frac{3x}{10} \right) 10$$

$$2x - 5x = 30 + 3x$$

$$-3x = 30 + 3x$$

$$-6x = 30$$

$$\boxed{x=-5}$$