

Feb. 27, 2018

Warmup

$$a) 3x - 9 = 6$$

$$3x - 9 + 9 = 6 + 9$$

$$\frac{3x}{3} = \frac{15}{3}$$

$$\boxed{x = 5}$$

$$b) 4x + 5 = 25$$

$$4x + 5 - 5 = 25 - 5$$

$$\frac{4x}{4} = \frac{20}{4}$$

$$\boxed{x = 5}$$

$$c) \quad 3(3x - 2) = 93$$

$$9x - 6 = 93$$

$$9x - 6 + 6 = 93 + 6$$

$$\frac{9x}{9} = \frac{99}{9}$$

$$x = 11$$

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Algebra... the last step

$$a) 3x + \underline{5} = x + 1$$

① move numbers to right

② move x's to the left

③ divide

$$3x + 5 - 5 = x + 1 - 5$$

$$3x = \underline{x} - 4$$

just do the opposite to  
remove the x

$$3x - x = x - x - 4$$

$$\frac{2x}{2} = \frac{-4}{2}$$

$$\boxed{x = -2}$$

$$b) 4x + \underline{9} = 2x + 1$$

$$4x + 9 - 9 = 2x + 1 - 9$$

$$4x = \underline{2x} - 8$$

$$4x - 2x = 2x - 2x - 8$$

$$\frac{2x}{2} = \frac{-8}{2}$$

$$\boxed{x = -4}$$

$$c) 5x - \underline{2} = 2x + 7$$

$$5x - 2 + 2 = 2x + 7 + 2$$

$$5x = \underline{2x} + 9$$

x's on left, #'s on right

$$5x - 2x = 2x - 2x + 9$$

$$\frac{3x}{3} = \frac{9}{3}$$

$$\boxed{x = 3}$$

$$d) 6x - 5 = x + 20$$

$$6x - 5 + 5 = x + 20 + 5$$

$$6x = x + 25$$

$$6x - x = x - x + 25$$

$$\frac{5x}{5} = \frac{25}{5}$$

$$\boxed{x = 5}$$



$$e) \quad 2(4x - 3) = 3(x + 2)$$

$$8x - 6 = 3x + 6$$

$$8x - 6 + 6 = 3x + 6 + 6$$

$$8x = 3x + 12$$

$$8x - 3x = 3x - 3x + 12$$

$$\frac{5x}{5} = \frac{12}{5}$$

$$x = 2.4$$