

August 24, 2016

1.2 COORD

#19) $1(5x-1) - (7x-9) = -2x-6$

$$3x-1-7x+9 = -2x-6$$

$$-4x+8 = -2x-6$$

$$+4x+6 \quad +4x+6$$

$$\frac{14}{2} = \frac{2x}{2}$$

$$\boxed{7 = x}$$

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#21) $100(5.45x + 4.4 = 1.12x + 1.6)$

$$545x + 440 = 112x + 160$$

$$-112x - 440 \quad -112x - 440$$

$$\frac{433x}{433} = \frac{-280}{433}$$

$$\boxed{x = -\frac{280}{433}}$$

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#41) $Ax + By = C$, solve for y

$$\frac{By}{B} = \frac{C - Ax}{B}$$

$$\boxed{y = \frac{C - Ax}{B}}$$

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#47) $\left(\frac{P_1 V_1}{n_1 T_1} = \frac{P_2 V_2}{n_2 T_2} \right)$ for V_2

K $\frac{n_2 T_2 P_1 V_1}{n_1 T_1} = \frac{P_2 V_2}{P_1}$

C $\frac{P_1}{P_1}$

F $\frac{n_2 T_2 P_1 V_1}{n_1 T_1} \cdot \frac{1}{P_1} = V_2$

$$\boxed{\frac{n_2 T_2 P_1 V_1}{n_1 T_1 P_1} = V_2}$$

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Do 1.2 COORD for Monday

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Completing the Square

$$x^2 - 6x - 1 = 0$$
, solve for x

① Isolate x terms

$$x^2 - 6x = 1$$

② Complete Square on x terms

⊖ $-6 \cdot \frac{1}{2} = -3$

⊕ $(-3)^2 = 9$ add to both sides

$$\boxed{x^2 - 6x + 9} = 1 + 9$$

Perfect Square Trinomial

$$(x-3)(x-3)$$

$$(x-3)^2 = 10$$

$$(x-3)^2 = 10$$

③ Take Square Root of Both Sides

$$\sqrt{(x-3)^2} = \pm \sqrt{10}$$

$$x-3 = \pm \sqrt{10}$$

$$x = 3 \pm \sqrt{10}$$

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$$x^2 + 6x + c$$

$\textcircled{a} 6 \cdot \frac{1}{2} = 3$
 $\textcircled{b} (3)^2 = 9$

$$\boxed{x^2 + 6x + 9}$$

$$(x+3)(x+3) = (x+3)^2$$

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$$x^2 - 3x + 5 = 0$$

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

$$-3 \cdot \frac{1}{2} = -\frac{3}{2}$$

$$\left(-\frac{3}{2}\right)^2 = \frac{9}{4}$$

$$\boxed{x^2 - 3x + \frac{9}{4}} = \frac{-5 + \frac{9}{4}}{1}$$

$$(x - \frac{3}{2})(x - \frac{3}{2}) = \frac{-20 + 9}{4}$$

$$\sqrt{(x - \frac{3}{2})^2} = \pm \sqrt{\frac{-11}{4}}$$

$$x - \frac{3}{2} = \pm \frac{\sqrt{-11}}{\sqrt{4}}$$

$$= \pm \frac{11i}{2}$$

$$\boxed{x = \frac{3 \pm 11i}{2}}$$

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