

5.5 Day 2 HW # 21

①

$$3x^2 + 2y^2 = 5$$

$$x - y = -2$$

$$\begin{array}{r} x - y = -2 \\ \quad +y \qquad \qquad +y \\ \hline \end{array}$$

$$x = y - 2$$

Need $x^2 = (y - 2)^2$

$$= (y - 2)(y - 2)$$

$$= y^2 - 2y - 2y + 4$$

$$x^2 = y^2 - 4y + 4$$

$$3(y^2 - 4y + 4) + 2y^2 = 5$$

$$3y^2 - 12y + 12 + 2y^2 = 5$$

$$5y^2 - 12y + 12 = 5$$

$$\hline 5y^2 - 12y + 7 = 0$$

$$\begin{array}{r|l} 35 & -12 \\ -5(-7) & -5-7 = -12 \end{array}$$

$$\frac{5y^2}{5y} - \frac{5y}{5y} - \frac{7y}{-7} + \frac{7}{-7} = 0$$

$$5y(y - 1) - 7(y - 1) = 0$$

5.5 Day 2

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$$(5y - 7)(y - 1) = 0$$

$$5y - 7 = 0$$

$$\begin{array}{r} +7 \\ +7 \end{array}$$

$$\frac{5y}{5} = \frac{7}{5}$$

$$y = \frac{7}{5}$$

$$y - 1 = 0$$

$$\begin{array}{r} +1 \\ +1 \end{array}$$

$$y = 1$$

$$[y = \frac{7}{5}] \quad x - y = -2$$

$$\begin{array}{r} x - \frac{7}{5} = -2 \\ +\frac{7}{5} \quad +\frac{7}{5} \end{array}$$

$$x = -2 + \frac{7}{5}$$

$$= -\frac{10}{5} + \frac{7}{5}$$

$$x = -\frac{3}{5}$$

$$\boxed{\left(-\frac{3}{5}, \frac{7}{5}\right)}$$

$$x - y = -2$$

$$[y = 1]$$

$$\begin{array}{r} x - 1 = -2 \\ +1 \quad +1 \end{array}$$

$$x = -1$$

$$\boxed{(-1, 1)}$$