

Ch. 10 Review

15. $x^2 = 196$

$\sqrt{x^2} = \pm \sqrt{196}$

$x = \pm 7.2$

$x = \pm 14$

$$\begin{array}{r} 49 \\ 2 \overline{) 98} \\ \underline{18} \\ 16 \end{array}$$

16. $(x-3)^2 = 25$

$\sqrt{(x-3)^2} = \pm \sqrt{25}$

$x - 3 = \pm 5$

$$\begin{array}{r} +3 \quad +3 \\ \hline x = 3 \pm 5 \end{array} \begin{array}{l} < 3+5 = 8 \\ < 3-5 = -2 \end{array}$$

17. $(x+5)^2 - 1 = 0$

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

$(x+5)^2 = 1$

$\sqrt{(x+5)^2} = \pm \sqrt{1}$

$x + 5 = \pm 1$

$$\begin{array}{r} -5 \quad -5 \\ \hline x = -5 + 1 = -4 \\ -5 - 1 = -6 \end{array}$$

18. $(x-2)^2 = 17$

$\sqrt{(x-2)^2} = \pm\sqrt{17}$

$x-2 = \pm\sqrt{17}$

$x = 2 \pm \sqrt{17}$ $\left\{ \begin{array}{l} 2+\sqrt{17} \\ 2-\sqrt{17} \end{array} \right.$

$x^2 = 9$
 $\sqrt{x^2} = \pm 3$

20. $y = x^2 - 5x + \frac{3}{4}$ $\frac{5}{2} \cdot \frac{5}{2} = \frac{25}{4}$

$y = (x^2 - 5x + \frac{25}{4}) + \frac{3}{4} - \frac{25}{4}$

$y = (x - \frac{5}{2})^2 - \frac{22}{4}$

$y = (x - \frac{5}{2})^2 - \frac{11}{2}$

$V: (\frac{5}{2}, -\frac{11}{2})$

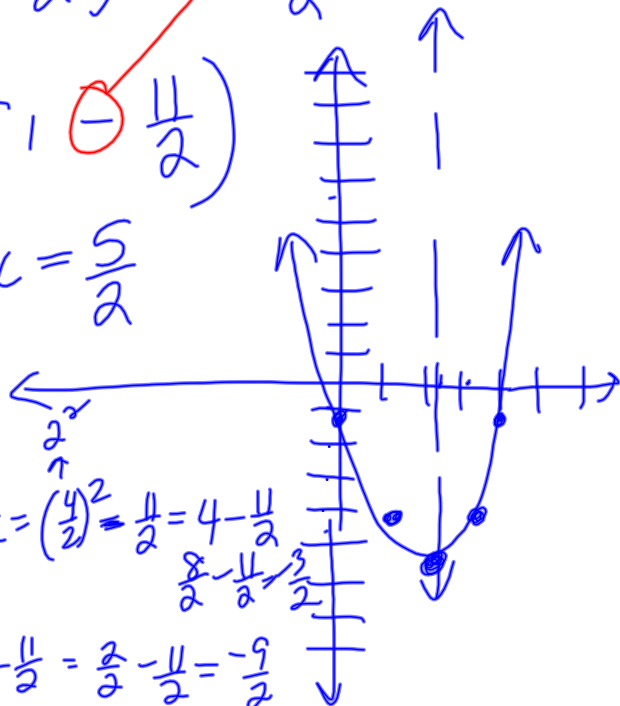
* Graph

axis: $x = \frac{5}{2}$

x	y
$\frac{7}{2}$	$-\frac{9}{2}$
$\frac{9}{2}$	$-\frac{3}{2}$

$(\frac{9}{2} - \frac{5}{2})^2 - \frac{11}{2} = (\frac{4}{2})^2 - \frac{11}{2} = 4 - \frac{11}{2} = \frac{8}{2} - \frac{11}{2} = -\frac{3}{2}$

$(\frac{7}{2} - \frac{5}{2})^2 - \frac{11}{2} = (\frac{2}{2})^2 - \frac{11}{2} = 1 - \frac{11}{2} = \frac{2}{2} - \frac{11}{2} = -\frac{9}{2}$



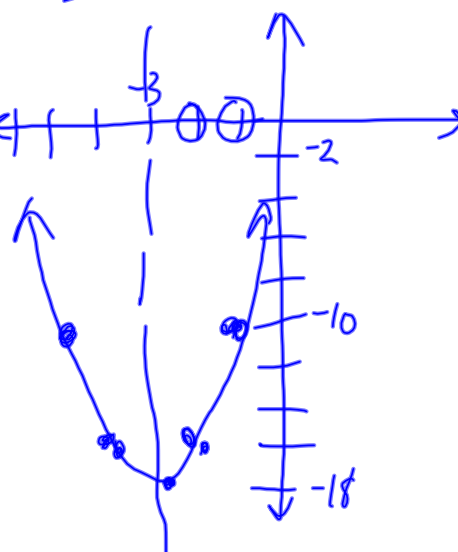
19. $y = x^2 + 6x - 9$

$$y = (x^2 + 6x + 9) - 9 - 9$$

$$y = (x + 3)^2 - 18$$

v: $(-3, -18)$

aos: $x = -3$



x	y
-2	-17
-1	-14

$$(-2+3)^2 - 18$$

$$1^2 - 18$$

$$1 - 18 = -17$$

$$(-1+3)^2 - 18$$

$$2^2 - 18$$

$$4 - 18 = -14$$