HOMEWORK... 7, 8, 12 Questions

Worksheet - Standard to Vertex (any value of a).pdf

(8) $y = -\frac{1}{4}x^2 - 3x - 18$

$y = -\frac{1}{4}(x^2 + 12x) - 18$

$y = -\frac{1}{4}(x^2 + 12x + 36) - 36\left(-\frac{1}{4}\right) - 18$

$y = -\frac{1}{4}(x + 6)^2 + 9 - 18$

$y = -\frac{1}{4}(x + 6)^2 - 9$

vertex $(-6, -9)$

(5) $a = -\frac{1}{4}$

y-int $(0, -18)$

$-3 \div -\frac{1}{4}$

$-3 \cdot -4$

12

(12) $y = -2x^2 + 36x - 168$ $y_{int}(0, -168)$ $a = -2$

$y = -2(x^2 - 18x) - 168$

$y = -2(x^2 - 18x + 81) - 81(-2) - 168$

$y = -2(x - 9)^2 + 162 - 168$

$y = -2(x - 9)^2 - 6$ vertex $(9, -6)$

(9) $y = -2x^2 + 2$ (S) & (V)

$a = -2$ (open down & narrow)

$h = 0$ no movement

$K = 2$ up 2

} vertex $(0, 2)$

7) $y = -\frac{2}{5}x^2 - \frac{16}{5}x - \frac{32}{5}$

$y = -\frac{2}{5}(x^2 + 8x) - \frac{32}{5}$

$y = -\frac{2}{5}(x^2 + 8x + 16) - 16\left(\frac{-2}{5}\right) - \frac{32}{5}$

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

$5y = -2x^2 - 16x - 32$

$\frac{-16}{5} \div \frac{-2}{5}$

$\frac{-16}{5} \cdot \frac{5}{-2}$

$8.$

Vertex $(-4, 0)$

Attachments

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