

10.4 Worksheet

Date _____ Period _____

Solve each equation by taking square roots. If the solution is a decimal round to the nearest hundredth.

1) $3n^2 + 2 = 281$

2) $10k^2 + 5 = 325$

3) $4x^2 + 4 = 68$

4) $10p^2 + 9 = 459$

5) $4r^2 - 9 = 0$

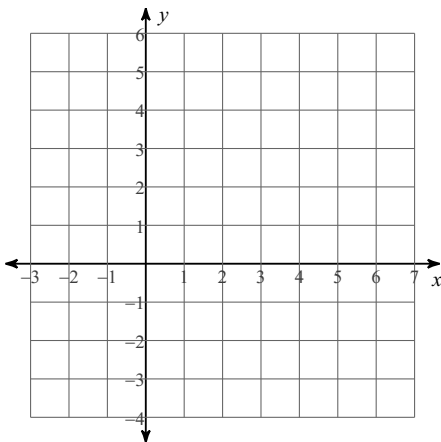
6) $-3 - 5p^2 = -23$

7) $3a^2 - 1 = 2$

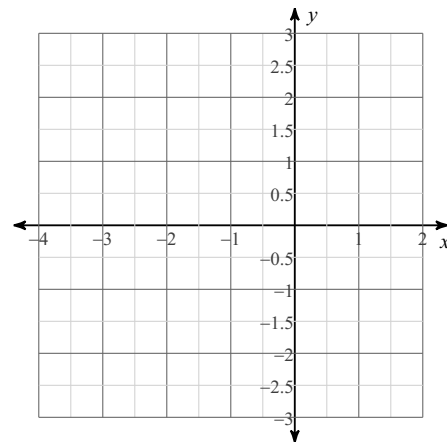
8) $9n^2 - 4 = 896$

Sketch the graph of each function. Label the vertex and x-solutions.

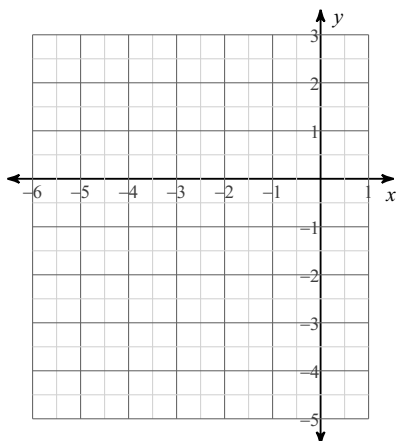
9) $f(x) = 2(x + 1)^2 - 3$



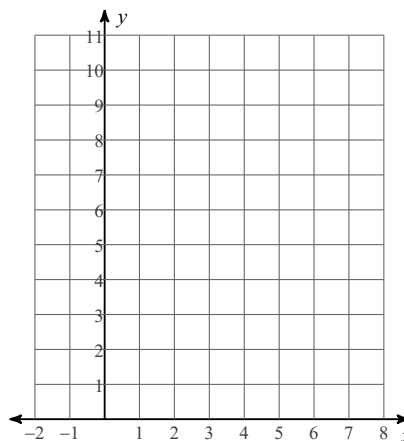
10) $f(x) = (x + 1)^2 - 2$



$$11) f(x) = -(x + 4)^2 + 1$$



$$12) f(x) = 2(x - 2)^2 + 2$$



Evaluate each using the values given.

$$13) 6 - (q - r); \text{ use } q = 1, \text{ and } r = 1$$

$$14) pq - m; \text{ use } m = 1, p = 6, \text{ and } q = 4$$

$$15) (h + j)(h + k); \text{ use } h = -8, j = -9, \text{ and } k = 3$$

$$16) m\left(n + \frac{p}{2}\right); \text{ use } m = -8, n = 9, \text{ and } p = -2$$

Use order of operations to simplify each expressions

$$17) \frac{-5 + \sqrt{4^2}}{11}$$

$$18) \frac{17 - \sqrt{3^2}}{8}$$