

# SPIRAL # 3

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7<sup>th</sup> GRADE



Evaluate the expression for the given value of the variable.

1)  $-x^2 - x$

when  $x = -4$

2)  $-x - x$  when

$x = -5$

3)  $4(x - y)^2$  when  
 $x = -3$  and  $y = -4$

4)  $-(x + y)^2$  when  
 $x = -4$  and  $y = -1$

5)  $mnp^2$  when  
 $m = -1$ ,  $n = -2$ ,  $p = -3$

6)  $a^3b^2$  when  
 $a = -2$  and  $b = -3$

Simplify the radicals.

1)  $\sqrt{15}$

2)  $\sqrt{100}$

3)  $\sqrt{125}$

4)  $\sqrt{32}$

5)  $\sqrt{40}$

6)  $\sqrt{36}$

7)  $\sqrt{8}$

8)  $\sqrt{27}$

9)  $\sqrt{6}$

10)  $\sqrt{12}$

Simplify the powers.

$$1) x^2 \cdot (x^{-4})^{-3}$$

$$2) \frac{y^3}{(y^4)^2}$$

$$3) \frac{z^2 \cdot z^{10}}{z^3}$$

$$4) \frac{m^{-5}}{m^4}$$

$$5) (d^{-4})^{-6}$$

$$6) p^{-3} \cdot p^{-15}$$

1) The area of a square piece of cardboard is  $70 \text{ cm}^2$ . What is the approximate length of each side of the cardboard rounded to the nearest tenth of a centimeter?

2) A square window has an area of  $169 \text{ in}^2$ . How wide is the window?

3) A quilter has 150 squares and wants to use as many as he can to make a square quilt. How many squares can he use? How many will be left?