

EVALUATING ALGEBRAIC EXPRESSIONS

#1 $-3p^2 - 4p + 3$ For $p = -2$

$$-3(\quad)^2 - 4(\quad) + 3$$

STEP 1: REPLACE THE VARIABLES WITH PARENTHESES

$$-3(-2)^2 - 4(-2) + 3$$

STEP 2: PLUG IN THE GIVEN VALUE INTO PARENTHESES

$$\begin{aligned} & -3(4) - 4(-2) + 3 \\ & -12 - 4(-2) + 3 \end{aligned}$$

STEP 3: SIMPLIFY

$$\frac{-15 + 1 + 3}{5}$$

$$\frac{-14 + 3}{5} \rightarrow \frac{-11}{5}$$

$$-12 + 8 + 3$$

$$-4 + 3$$

$$\textcircled{-1}$$

#2

$$\frac{5y - z + x}{x - y}$$

$$x = 2$$

$$y = -3$$

$$z = -1$$

$$\frac{5(-3) - (-1) + (2)}{(2) - (-3)}$$

$$\frac{5(-3) + 1 + 2}{2 + 3}$$

#3

$$a^2 - 5b^2$$

$$a = -2$$

$$b = -3$$

$$\frac{(-2)^2 - 5(-3)^2}{4 - 5(-3)^2}$$

$$4 - 5(9)$$

$$4 - 45$$

$$\textcircled{-41}$$

DISTRIBUTIVE PROPERTY

#4 $2(3x^2 - 7x + 4)$

$$2(3x^2) + 2(-7x) + 2(4)$$

$$6x^2 - 14x + 8$$

#5

$$-3(4a - b)$$

$$-3(4a) - 3(-b)$$

$$-12a + 3b$$

#6

$$(4x - 7y)5$$

$$5(4x) + 5(-7y)$$

$$20x - 35y$$