

Equivalent Expressions Worksheets

1. Simplify each expression. Verify that your expression is equivalent to the one given by evaluating each expression using $x = 5$.

a) $3x - (-2 - 4x)$

b) $3x - (2 - 4x)$

c) $-3x - (-2 - 4x)$

2. Simplify each expression. Verify that your expression is equivalent to the one given by evaluating each expression for the given value of the variable.

a) $4y - (3 + y);$
 $y = 2$

b) $(2b + 1) - b;$
 $b = -4$

c) $(6c - 4) - (c - 3);$
 $c = -7$

Equivalent Expressions Worksheets

1. Simplify each expression. Verify that your expression is equivalent to the one given by evaluating each expression using $x = 5$.

a) $3x - (-2 - 4x)$

$$7x + 2$$

$$7(5) + 2$$

$$35 + 2$$

$$37$$

$$3(5) - (-2 - 4(5))$$

$$15 - (-2 + (-4(5)))$$

$$15 - (-2 + (-20))$$

$$15 - (-22)$$

$$15 + 22$$

$$37$$

b) $3x - (2 - 4x)$

$$7x - 2$$

$$7(5) - 2$$

$$35 - 2$$

$$33$$

$$3(5) - (2 - 4(5))$$

$$15 - (2 + (-4(5)))$$

$$15 - (2 + (-20))$$

$$15 - (-18)$$

$$15 + 18$$

$$33$$

c) $-3x - (-2 - 4x)$

$$x + 2$$

$$5 + 2$$

$$7$$

$$-3(5) - (-2 - 4(5))$$

$$-15 - (-2 + (-4(5)))$$

$$-15 - (-2 + (-20))$$

$$-15 - (-22)$$

$$-15 + 22$$

$$7$$

2. Simplify each expression. Verify that your expression is equivalent to the one given by evaluating each expression for the given value of the variable.

a) $4y - (3 + y);$

$y = 2$

$$3y - 3$$

$$3(2) - 3$$

$$6 - 3$$

$$3$$

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

$$8 - 5$$

$$8 + (-5)$$

$$3$$

b) $(2b + 1) - b;$

$b = -4$

$$b + 1$$

$$-4 + 1$$

$$-3$$

$$(2(-4) + 1) - (-4)$$

$$(-8 + 1) + 4$$

$$(-7) + 4$$

$$-3$$

c) $(6c - 4) - (c - 3);$

$c = -7$

$$5c - 1$$

$$5(-7) - 1$$

$$-35 - 1$$

$$-36$$

$$(6(-7) - 4) - (-7 - 3)$$

$$(-42 - 4) - (-10)$$

$$-42 + (-4) + (10)$$

$$-46 + 10$$

$$-36$$

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