

3.7 Homework:

Name: answer key

Date: _____ Per: _____

Evaluating Algebraic Expressions
and Solving Equations
(with negative numbers)

(just answers, you must show your work!)

Directions: Evaluate each expression given the variable replacements.

1. $9a - ab + 5b$ if $a = 2$ and $b = 7$

39

2. $r^3 + 2s^2$ if $r = -3$ and $s = 4$

5

3. $3|y| + (y - x^2)$ if $x = -1$ and $y = -5$

9

4. $7w - 18v \div [(-3)(-2)]$ if $w = 12$ and $v = -4$

96

5. $\frac{2s+9}{3r \div s} - |1-s|$ if $r = -14$ and $s = 6$

-8

6. $\frac{a^2 + 4a + 7b}{5 - a^3}$ if $a = 2$ and $b = 6$

-18

this is just ^{the} answers, you must show your work!

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Directions: Solve each equation. Check all solutions.

1. $3x - 4 = -31$

$x = -9$

✓ $3(-9) - 4$
 $-27 - 4$
 -31 ✓

2. $33 = -2a + 7$

$-13 = a$

✓ $-2(-13) + 7$
 $26 + 7$
 33 ✓

3. $\frac{w}{-4} + 17 = 9$

$w = 32$

✓ $\frac{32}{-4} + 17$
 $-8 + 17$
 9 ✓

4. $-1 - 7p = 13$

$p = -2$

✓ $-1 - 7(-2)$
 $-1 + 14$
 13 ✓

5. $-5k - 16 = 39$

$k = -11$

✓ $-5(-11) - 16$
 $+55 - 16 = 39$ ✓

6. $-28 = \frac{r}{7} - 26$

$r = -14$

✓ $\frac{-14}{7} - 26$
 $-2 - 26 = -28$ ✓

7. $-14 = -11 + \frac{n}{5}$

$n = -15$

✓ $-11 + \frac{-15}{5}$
 $-11 + (-3)$
 -14 ✓

8. $26 - f = 40$

$f = -14$

✓ $26 - (-14)$
 $= 26 + 14$
 $= 40$ ✓

9. $2.8k - 11 = 45$

$k = 20$

✓ $2.8(20) - 11$
 $56 - 11$
 45 ✓

10. $1 + \frac{r}{-1.5} = 9$

$r = -12$

✓ $1 + \frac{-12}{-1.5}$
 $1 + 8 = 9$ ✓

make sure you are showing your work!