

Algebra 1
Midterm Review

Operations with Integers

Evaluate the expression, following the Order of Operations.

1. $1 + 5^2 \div 50$

$$1 + 25 \div 50$$

$$26 \div 50$$

$$(0.52)$$

2. $24 + 4(3 + 1)$

$$24 + 4 + 4$$

$$24 + 8$$

$$(32)$$

3. $12(6 - 3.5)^2 - 1.5$

$$12 + 2.5^2 - 1.5$$

$$12 + 6.25 - 1.5$$

$$12 + 4.75$$

$$(16.75)$$

✓ 4. $8(20 - (9 - 5)^2)$

$$8(20 - 4^2)$$

$$8(20 - 16)$$

$$8(4)$$

$$(32)$$

✓ 5. $\frac{3(5-2)}{15 \div 5}$

$$\frac{3(3)}{15 \div 5}$$

$$\frac{9}{3}$$

$$(3)$$

6. Use the distributive property to write an equivalent expression.

✓ a. $8(y + 2)$

$8y + 16$

✓ b. $(m + 5)5$

$5m + 25$

✓ c. $-2(3 - x)$

$-6 + 2x$

Expressions and Equations

7. Evaluate each expression if $a = 5$, $b = -2$ and $c = -4$.

✓ a. $a - bc$ $5 - (-2)(-4) \mid 5 - 8$ (-3)

b. $2b + 4ac$ $2(-2) + 4(5)(-4) \mid -4 - 80$ (-84)

c. $\frac{ac}{b}$ $\frac{5(-4)}{-2}$ (-10)

8. Evaluate each expression if $a = \frac{1}{2}$, $b = -5$ and $c = -4$

✓ a. $3b - 4a$ $3(-5) - 4(\frac{1}{2})$
 $-15 - 2$ (-17)

b. $2ab - 4ac$ $2(\frac{1}{2})(-5) - 4(\frac{1}{2})(-4)$
 $1(-5) - 4(\frac{1}{2})(-4)$
 $-5 - 4(\frac{1}{2})(-4)$
 $-5 - 9(\frac{1}{2})(-4)$
 $-4.5(-4)$
 (18)