

# MATH A UNIT 1 REVIEW

*Don't lose points! Turn this in with the homework assignment.*

## **PART 1. SHOW YOUR WORK. CIRCLE YOUR ANSWERS.**

**1. Find the value of each of the following.**

a)  $3-3(4^2-2^2)$       b)  $\frac{(3)(5)}{(8-7)\cdot 3}$       c)  $12\div 3\cdot 2+4$

d)  $\frac{6+2^2}{17-6\cdot 2}$       e)  $-16\div 2\cdot 4+32$       f)  $10-(-2)-5$

g)  $-14.3+(-5.5)+6.2$       h)  $[(11.5-2.9)-(2.4)(1.5)]\div 2.5$

**2. Perform the indicated operations.**

a)  $\frac{2}{3}-\frac{1}{4}$       b)  $-\frac{1}{2}+\frac{3}{5}$       c)  $\frac{3}{4}+\frac{5}{3}-2$       d)  $-\frac{2}{5}-\frac{2}{5}$

e)  $\left(-\frac{1}{2}\div\frac{3}{2}\right)\left(-\frac{9}{2}\right)$       f)  $\left(-\frac{2}{5}\div\frac{2}{5}\right)\left(-\frac{2}{3}\right)$       g)  $\frac{2}{5}+\frac{5}{2}+3$       h)  $\left(-\frac{5}{3}\div\frac{1}{3}\right)\cdot\left(\frac{4}{5}\right)$

## **PART 2. SHOW YOUR WORK. CIRCLE YOUR ANSWERS.**

**1. Evaluate each of the following algebraic expressions.**

Let  $a = -1$ ,  $b = -2$ ,  $c = 3$ .

a)  $(c-a)(c-b)$       b)  $a^2-4b$       c)  $\frac{b-c}{2b-a}$

d)  $a^2-2ab+b^2$       e)  $(a-b)b$       f)  $\frac{-a^2+c}{-b}$

g)  $-2(b^2-ac)$       h)  $4(-c+b^2)$

**2. Perform the indicated operations and simplify.**

a)  $7(y-1)+10$       b)  $3(m-2)-(1+m)$       c)  $\frac{4(x-1)+6x+4}{2x}$

d)  $\frac{-10+15y}{-5}$       e)  $x(x-1)+3(x-2)$       f)  $\frac{-3(2-x)-3x}{12}$

**3. Do the following problems from the textbook.**

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**PART 3. SHOW YOUR WORK. CIRCLE YOUR ANSWERS.**

1. Solve each equation and check your answers.

a)  $2x - 5 = 9$

b)  $3y - 8 = -5y$

c)  $15 - 4t = 7 - 2t$

d)  $2(m - 4) + 4 = 5(9 - m)$

e)  $\frac{5x}{3} = \frac{1}{6}$

f)  $3x + \frac{1}{2} = 1$

g)  $5 + \frac{x}{2} = 9$

h)  $2f - 3f = 4f - 5$

2. Solve each equation for  $x$ .

a)  $mx + e = t$

b)  $J = 6 - x$

c)  $2x - b = 5x$

d)  $k - 4x = 4x$

e)  $y = mx + b$

f)  $x = -x$

3. Show an algebraic solution for each problem.

a) Find two consecutive integers whose sum is 27.

b) Find three consecutive odd integers whose sum is 39.

c) Find four consecutive even integers whose sum is 44.

**PART 4. SHOW YOUR WORK. CIRCLE YOUR ANSWERS.**

1. Solve each inequality and sketch the graph of the solution on a number line.

a)  $x + 3 > -2$

b)  $5x - 4 \leq 2x - 1$

c)  $-3x - 11 \geq -2x + 1$

d)  $3 - 4x < 4x - 5$

e)  $-3 > x - 1 > -4$

f)  $-11 \leq 3x - 5 < 1$

g)  $1 > \frac{x}{-2} > -3$

h)  $-3 \leq \frac{4 - x}{2} \leq 2$

i)  $-4 > \frac{2x + 1}{-2} \geq -\frac{11}{2}$

2. Do the following problems from the textbook.

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