Name: _____ Date: _____ Period: _____

**Algebra 1B – unit 1 practice exam – Fall 2015**

Show your work where needed, and write your answers in the answer box on the right.

**Simplify**

1) $(8 - 4) \cdot 2$

2) $24 \div 3 \cdot 2 - 3^2$

3) $250 \div [5(3 \cdot 7 + 4)]$

4) $\frac{8^2 - 2^2}{(2 \cdot 8) + 4}$

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

**Write an algebraic expression**

6) The sum of five times *h* and twice *g* is equal to 23.

7) The quantity of 3 minus a number is 5 less than twice another number.

8) The product of two numbers divided by the difference of those two numbers is 36.

9) The quotient of x and 5 is equal to x increased by 9.

10) Katie is twice as old as her sister Mara. The sum of their ages is 24. Write a one-variable equation to represent the situation.

**Solve the following equations**

11) $h - 3 = -2$

12) $w - \frac{1}{2} = \frac{5}{8}$

13) $m - (-12) = 10$

14) $z + 2 = -13$

15) $m + (-8) = 2$

16) $-\frac{3}{8} + x = \frac{5}{8}$

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

9) _____

10) _____

11) _____

12) _____

13) _____

14) _____

15) _____

16) _____

17) $\frac{h}{3} = -2$

18) $25 = 5m$

19) $3h = -42$

20) $5x + 2 = 27$

21) $14n - 8 = 34$

22) $\frac{7}{8}p - 4 = 10$

23) $\frac{4b + 8}{-2} = 10$

24) $6 - b = 5b + 30$

25) $\frac{3}{4}k - 5 = \frac{1}{4}k - 1$

26) $\frac{1}{2}b + 4 = \frac{1}{8}b + 88$

27) $2(7 + 3t) = -t$

28) $18 = 3(2c + 2)$

29) y=mx + b, solve for x

30) A= ½bh, solve for b

**Extra credit**

31) Find three consecutive integers whose sum is 96.

32) Find two consecutive odd integers whose sum is 176.

33) Simplify: $\frac{-3+\sqrt{7^2-3(2)(4)}}{2(3)}$

17) _____

18) _____

19) _____

20) _____

21) _____

22) _____

23) _____

24) _____

25) _____

26) _____

27) _____

28) _____

29) _____

30) _____

31) _____

32) _____

33)_____