Integrated Algebra Review

1. Evaluate and simplify:

a) $5(8 + 2) + 3(11 - 7)$ b) $(7 + 8) \div (4 - 1)$

2. Evaluate and simplify each expression

a) $(-23)(-3)$ b) $(-7)(-3) - (-11)(-6)$ c) $\frac{-64}{8} + 3(-4)(2)$ d) $-15 + (-29)$

3. Evaluate the following, where $x = -6, y = 3, z = -5$

a) $\frac{-5(x + y)}{3}$ b) $xy + 8z$

4. Evaluate and simplify the following where $a = 2, b = 6$

a) $\frac{3(b - 2)}{4(a + 1)}$ b) $(a + b) \div a$

5. Evaluate and simplify the following.

a) $\frac{5m + n}{5}$ for $m = 6$ and $n = 15$ b) $\frac{a + 2b}{5}$ for $a = 1$ and $b = 2$

c) $(-3)^2 - 4^2$ d) $26 \div (4 - (-9))$ e) $2^4 - 3^2 + 5^2$

6. Solve and check

a) $6 - 3d = 5(2 - d)$ b) $-6y + 15 = 3(y - 1)$ c) $4g + 7 - 2g = 5g - 2$ d) $\frac{3}{4}t - \frac{5}{6} = \frac{2}{3}t$

e) $\frac{1}{2}d - \frac{3}{4} = \frac{3}{5}d$

7. Solve each equation for the given variable

a) $4(m - 2n) = p; m$ b) $A = \frac{1}{2}bh; h$ c) $y = mx + b; m$ d) $12 + 3y = z; y$

e) $2x + y = 6; y$