

Summer Homework**Evaluate each expression.**

1) $\frac{5 + (5)(2)}{5}$

2) $(4)((2)(5)) - \frac{15}{4 - 1}$

3) $\left(4 + 5 - \frac{10}{5 - 3}\right)(3)$

4) $(5 + 4)\left(\frac{10}{4 + 5 - 4}\right)$

5) $(5 - 2)(4 + 2) - (2)(6)$

6) $(5 - 4 + 6)(1 + 3 + 3)$

7) $\frac{16}{4} - 4 + (3)(2) - 4$

8) $3 - (2 - 1) + \left(\frac{6}{2}\right)^3$

9) $\frac{((3)(2))(2)}{3} + (4)(6)$

10) $4 - 1^2 - \left(2 - \frac{2}{2}\right)$

Solve each equation.

11) $116 = -2n + 4(-3n + 1)$

12) $220 = -4(1 + 8n)$

$$13) 114 = 3(3 - 7k)$$

$$14) -93 = -3(5a - 1) + 3a$$

$$15) -5(6 + 6a) + 3 = 153$$

$$16) -200 = -8(1 + 4x)$$

$$17) -125 = -5(3x + 4)$$

$$18) 97 = 3(-3x + 7) + 4$$

$$19) -8(n + 8) = -96$$

$$20) 7(4x + 6) = 266$$

Solve each proportion.

$$21) \frac{a}{2} = \frac{2}{8}$$

$$22) \frac{4}{8} = \frac{n}{9}$$

$$23) \frac{7}{b} = \frac{4}{9}$$

$$24) \frac{9}{v} = \frac{4}{9}$$

$$25) \frac{7}{8} = \frac{x}{3}$$

$$26) \frac{4}{r} = \frac{10}{r + 6}$$

$$27) \frac{v-7}{v} = \frac{4}{6}$$

$$28) \frac{3}{k} = \frac{2}{k+3}$$

$$29) \frac{6}{x} = \frac{8}{x+8}$$

$$30) \frac{10}{r} = \frac{4}{r-3}$$

Solve each equation by factoring.

$$31) r^2 - 7r - 8 = 0$$

$$32) n^2 + 2n - 3 = 0$$

$$33) b^2 + 12b + 35 = 0$$

$$34) b^2 + 4b + 4 = 0$$

$$35) p^2 + 10p + 25 = 0$$

$$36) n^2 + n - 42 = 0$$

$$37) x^2 + 3x + 2 = 0$$

$$38) n^2 - 8n = 0$$

$$39) p^2 + 4p - 32 = 0$$

$$40) n^2 + 5n - 14 = 0$$

Simplify. Your answer should contain only positive exponents.

$$41) \left(\frac{uv^4 \cdot 2u^2v^2}{2u^4v^3} \right)^3$$

$$42) \left(\frac{2a^2b^2}{a^4b^3 \cdot 2b \cdot 2b^2} \right)^3$$

$$43) \left(\frac{x^3}{(2x^4y^4)^3 \cdot y^2} \right)^3$$

$$44) \frac{n \cdot 2mn^0}{(n^2)^4}$$

$$45) \frac{2x^4y^3 \cdot (x^2y^0)^4}{x^2y^2}$$

$$46) \frac{(2x^2y^3)^2}{2xy^4 \cdot x^4}$$

$$47) \left(\frac{x^4y^3}{2x^3y^4 \cdot 2x^3y^3} \right)^0$$

$$48) \left(\frac{u^4 \cdot vu^2}{2u^3v^3} \right)^0$$

$$49) \left(\frac{a^4b^3}{ba^3 \cdot b^4} \right)^3$$

$$50) \frac{x^0y^4 \cdot x^4y^2}{(2xy^3)^0}$$