



Year 7 Weekly Tutorial - 06

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1. Expand and simplify.

a) $2x(x + 5) - x(x - 5)$

b) $5\left(x + \frac{1}{2}\right) - 3\left(x - \frac{1}{2}\right)$

2. Simplify.

a) $-3x^2 \times 2x^3$

d) $5a^{-6} \times 3a^4$

b) $x^{\frac{1}{2}} \times x^{\frac{1}{3}} \times x$

e) $\frac{7^5 \times 5^3 \times 7^2}{5^2 \times 7^6}$

c) $3x^{\frac{3}{2}} \times x^{\frac{5}{2}}$

f) $\frac{4^3 \times 3^5 \times 3^{-3}}{4^2 \times 3}$

3. Factorize.

a) $4x^2 - 20x$

c) $5a^2 - 10a + 5ab$

b) $3a^3 - 9a^2$

d) $3x^2y + 9xy^2$

4. Solve.

a) $3(x - 2) + 12 = 2x + 5$

g) $\frac{2}{3}(x + 3) = 4$

b) $5(x + 3) = 3(x + 7)$

h) $\frac{3}{5}(x - 4) = 9$

c) $\frac{x}{2} = 3$

i) $\frac{3}{2}(x - 2) = x + 1$

d) $\frac{3x}{4} = 9$

j) $\frac{4}{3}(x + 7) = x + 9$

e) $\frac{x-3}{2} = 5$

f) $\frac{2x+1}{3} = 7$

5. Simplify following fractions.

a) $3\frac{2}{5} + 4\frac{1}{3}$

c) $3\frac{2}{3} \times 2\frac{1}{5}$

b) $4\frac{2}{7} - 2\frac{3}{5}$

d) $2\frac{1}{5} \div 3\frac{1}{2}$