REVISION: ALGEBRAIC EXPRESSIONS & EXPONENTS

17 MARCH 2014

Lesson Description

In this lesson we revise:

- Algebraic Expressions: Products & Surds
- Algebraic Expressions: Simplifying Fractions
- Exponents

Improve your Skills

Algebraic Expressions: Products & Surds

Question 1

Find the products of:

a.) $(2a^2 - b)(3a^2 + 2b)$

b.) (½x-½y)(½x+½y)

Question 2

Find the product of $(2a - b)^2$

Question 3

Simplify:

a.) $(2x+y)(x^2-3xy+4y^2)$

Algebraic Expressions: Simplifying Fractions

Question 1

Simplify:

$$\frac{ax^2-x+2a^2x-2a}{x+2a}$$

Question 2

Simplify:

$$\frac{x^2+x-6}{3x^2-12x} \div \frac{x^3-2x^2}{x^2-16} \times \frac{1}{x+4}$$

Question 3

Simplify:

$$\frac{4x-9y}{8x^3+27y^3} - \frac{1}{2x^2+xy-3y^2}$$

Exponents

Question 1

Simplify:

$$\frac{20^{x+1}\times 4^{x}}{16^{x-1}\times 5^{x}}$$

Question 2

Simplify:

$$\frac{2^{x+1}+4^{x}}{2^{x}-2^{x-1}}$$

Answers

Algebraic Expressions: Products & Surds

Question 1

1a.) $6a^4 + a^2b - 2b^2$

1b,) $\frac{1}{4}x^2 - \frac{1}{4}y^2$

Question 2

$4a^2 - 4ab + b^2$

Question 3

$2x^3 - 5x^2y + 5xy^2 + 4y^3$

Algebraic Expressions: Simplifying Fractions

Question 1

ax-1

Question 2

$$\frac{x+3}{3x^3}$$

Question 3

$$\frac{-7y}{(2x+3y)(x-y)(4x^2-6xy+9y^2)}$$

Exponents

Question 1

5.2^6

Question 2

$$\frac{2(2+2^x)}{3}$$