

22nd June



Corbettmaths

Simplify

$$\frac{x+3}{x^3} \times \frac{x^7}{x+6} \div \frac{x^2}{5x+30}$$

$5(x+6)$

$$\frac{x+3}{x^3} \times \frac{x^7}{x+6} \times \frac{5(x+6)}{x^2}$$

$$5(x+3)x^2$$

$$= 5(x^3 + 3x^2) = 5x^2(x+3)$$

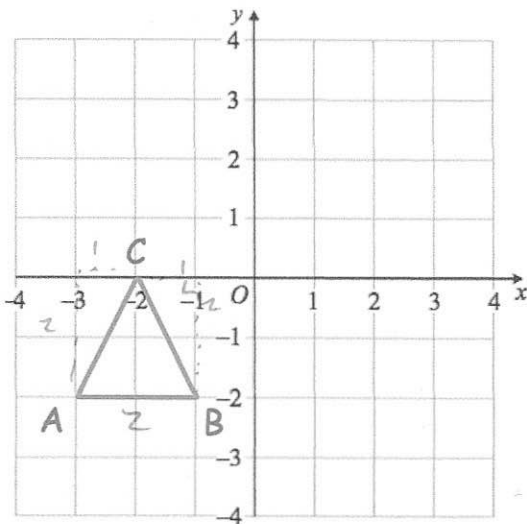
A and B are similar cuboids

surface area of A: surface area of B
= 9 : 25

3:5

Work out volume of A : volume of B

27 : 125



Describe a single transformation where point B is invariant and points A and C are not invariant.

Reflection in the line
 $x = -1$

Calculate the perimeter of triangle ABC

$$2 + \sqrt{5} + \sqrt{5}$$

$$2 + 2\sqrt{5}$$

or 6.4721

How many odd numbers less than 50000 can be created using the digits

1 2 5 7 8 9

using each digit once?

starting with 1
 $1 \times 4 \times 3 \times 2 \times 1 \times 3$

starting with 2
 $1 \times 4 \times 3 \times 2 \times 1 \times 4$

} 168