



Simplify

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

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

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

A and B are similar cuboids

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

Work out volume of A : volume of B

$$27 : 125$$

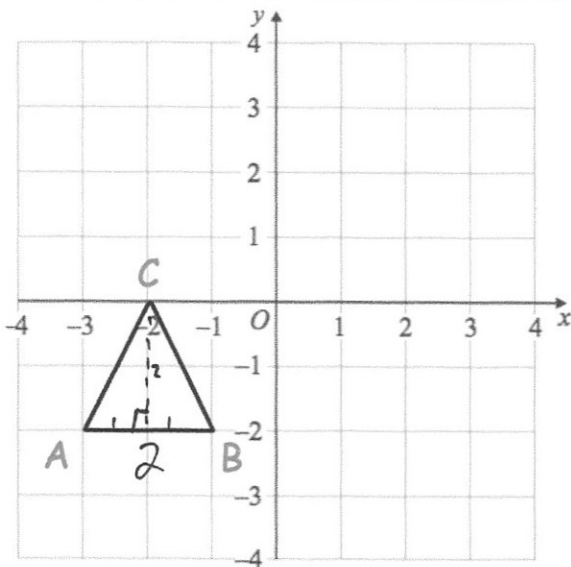
$$\text{Sides } 3:5$$

$$\text{Areas } 9:25$$

$$\text{Volume } \frac{27}{125}$$

$$27:125$$

$$A:B$$



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

Reflection,  $x = -1$ 

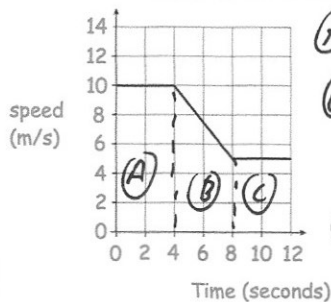
Calculate the perimeter of triangle ABC

$$AC^2 = 1^2 + 2^2$$

$$AC^2 = 5$$

$$AC = \sqrt{5}$$

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



$$(A): 10 \times 4 = 40$$

$$(B): \frac{1}{2}(10+5) \times 4$$

$$= 30$$

$$(C) 4 \times 5 = 20$$

Calculate the total distance travelled

$$40 + 30 + 20 = 90 \text{ m}$$