



4 blue socks and 6 black socks are in a drawer.

Anju takes out two socks at random.

Work out the probability that Anju takes out two socks are different colours.

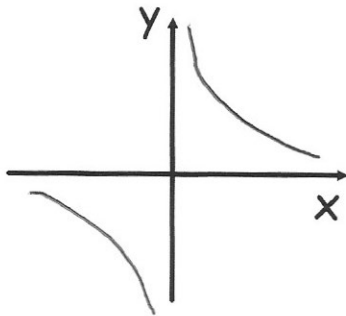
$$P(\text{Blue/black}) = \frac{4}{10} \times \frac{6}{9} = \frac{24}{90}$$

$$P(\text{black/blue}) = \frac{6}{10} \times \frac{4}{9} = \frac{24}{90}$$

$$\frac{48}{90} = \frac{8}{15}$$

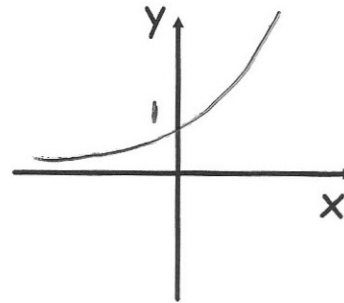
Sketch

$$y = \frac{1}{x}$$



Sketch

$$y = 4^x$$



Ornaments A and B are mathematically similar. They are solid and both made from copper and zinc.

Ornament A has a height of 5cm and volume of 30cm<sup>3</sup>

Ornament B has a height of 18cm.

The ornaments are made from copper and zinc in the ratio 3:2

The density of copper is 8.96g/cm<sup>3</sup>

The density of zinc is 7.13g/cm<sup>3</sup>

Work out the difference in mass between ornament A and ornament B.

[A]	18cm <sup>3</sup> of copper	12cm <sup>3</sup> of Zinc
	↓ x 8.96	↓ x 7.13
	161.28g	85.56g
	<hr/>	
	246.84g	

[B]	839.808cm <sup>3</sup> of copper	559.872cm <sup>3</sup> of Zinc
	↓ x 8.96	↓ x 7.13
	7524.67968g	3991.88736g
	<hr/>	
	11516.56704g	

11269.7g to 1dp