

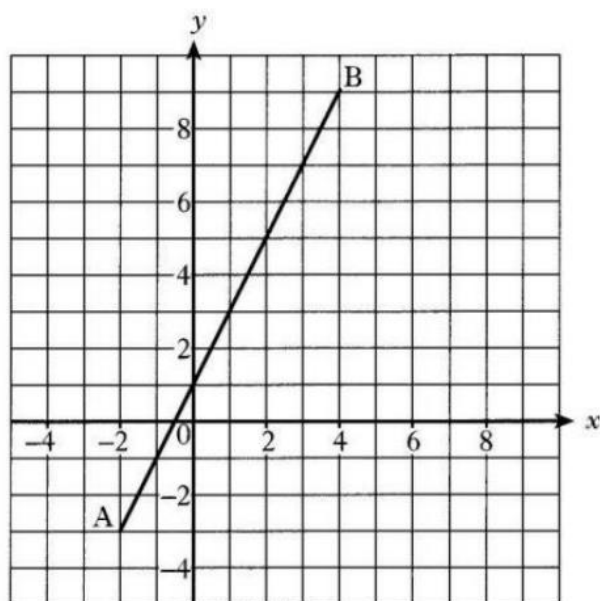
National 5 Maths Practice Paper D

Paper 1 You may NOT use a calculator

1. Find the gradient of the straight line joining points A(3, -7) and B(-5, 3) 2

2. Evaluate $\frac{2}{5}$ of $3\frac{1}{2} + \frac{4}{5}$ 3

3.



Find the equation of the straight line AB. 3

5. Marmalade is on special offer.
Each jar on special offer contains 12.5% more than the standard jar.

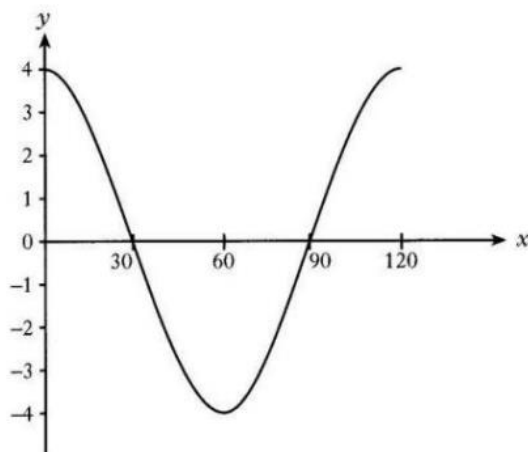


A jar on special offer contains 450 g of marmalade.

How much does the standard jar contain?

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9. Part of the graph of $y = a \cos bx^\circ$ is shown in the diagram.



State the values of a and b .

2

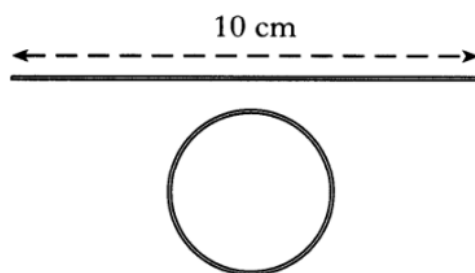
10. Evaluate $2^0 + 3^{-1}$.

2

11. Express $\sqrt{12} + 5\sqrt{3} - \sqrt{27}$ as a surd in its simplest form.

3

12. A piece of gold wire 10 centimetres long is made into a circle.



The circumference of the circle is equal to the length of the wire.

Show that the area of the circle is exactly $\frac{25}{\pi}$ square centimetres.

4

13. Two variables x and y are connected by the relationship $y = ax + b$.

Sketch a possible graph of y against x to illustrate this relationship when a and b are both less than zero.

3