

15. Two meat breakfasts and 3 vegan breakfasts cost £29.45.

a) Write down an equation to represent this information.

Three meat breakfasts and four vegan breakfasts cost £41.10

b) Write down a second equation to represent this information.

c) Solve the equations to find the cost of one meat breakfast and the cost of one vegan breakfast.

16. Jupiter, the largest planet, has a radius of 7.15×10^7 metres.

Assuming it is a perfect sphere, calculate its volume in cubic km.

Leave your answer in scientific notation, correct to 3 significant figures.

$$[\text{Volume of sphere} = \frac{4}{3} \pi r^3]$$

17. A watch was discounted by 20% and now costs £ 74. Work out the full price of the watch.

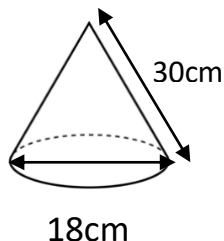
18. State the gradient of each line below:

a) $2x + 5y - 4 = 0$ b) $4x - 3y - 12 = 0$ c) $x - y - 12 = 0$

19. Simplify each algebraic fraction:

a) $\frac{x^2-2x-24}{x^2-36}$ b) $\frac{x^2-x-30}{2x^2-50}$ c) $\frac{2x^2-3x-5}{3x^2-3}$

20. A cone is shown below. Calculate its volume correct to 3 significant figures.



$$[\text{Volume of cone} = \frac{1}{3} \pi r^2 h]$$

21. A ring is valued at £740 and expected to increase in value by 3.5% per year for each of the next 4 years.

How much will it be worth, to the nearest pound, after 4 years?