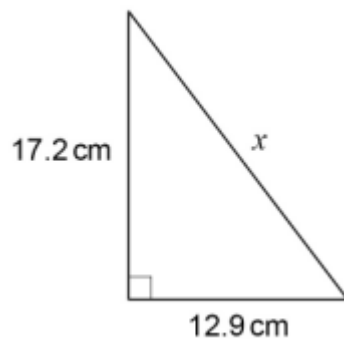


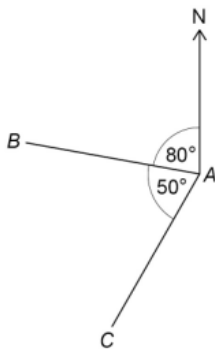
AQA GCSE Mathematics Calculator 2023 Higher Paper 2 Revision Worksheet

Questions 1–12

1. Expand $5x(x^2 + 3)$
2. (a) Write 1.52 as an improper fraction in its simplest form.
(b) Work out 60 as a percentage of 20.
3. Use Pythagoras' theorem to work out the value of x in the triangle below:



4. A , B and C are three points. Work out the bearing of C from A .



5. Three shops sell the same type and size of lip balm stick:
 - Shop A: £2.39 each
 - Shop B: £3.08 each, buy one get one half price
 - Shop C: Pack of 4, was £11.40, now $\frac{1}{6}$ off

Which shop is the best value for 8 sticks and what is the total cost in that shop? **Show working to support your answer.**

6. Round 1 of voting for Head Student is taking place in a school.

(a) To reach round 2, a student must receive at least $\frac{4}{15}$ of the votes

.What is the largest possible number of students that can reach round 2? **15 11 3 4**

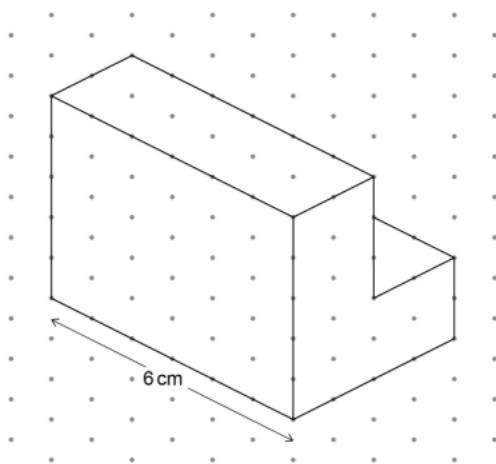
(b) There are 900 votes in round 1. Sean receives 180 votes. Amy draws a pie chart to represent the results. Here is her method to work out the angle needed for Sean:

$$180 \div 900 \times 100 = 20$$

The angle should be 20° .

Is Amy's method correct? Tick a box. Yes / No. **Give a reason for your answer.**

7. Here is a prism drawn on an isometric grid. Work out the volume of the prism.



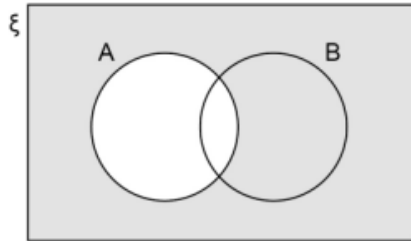
8. Tasha drove 198 miles. Her average speed for the first 3 hours was 45 miles per hour. Her average speed for the rest of the journey was 31.5 miles per hour.

Work out her average speed for the whole journey.

9. Here is the term-to-term rule for a sequence: Double the previous term and add 3.

The first three terms of the sequence are $a + 1$, $2a + 5$, $4a + 13$.

Show that the sum of the first four terms is a multiple of 3.



Which of these represents the shaded region?

Circle your answer.

B

$A' \cup B$

$A' \cap B$

A'

11. A fair coin is thrown a number of times. The probability that every throw results in Heads is $\frac{1}{64}$.
How many times is the coin thrown?

12. Here is some information about the members of a basketball club:

	Number of members	Mean height of members
Junior	30	1.6 m
Senior	20	2.05 m

Work out the mean height of all 50 members of the club. Give your answer as a decimal.