

KS4

GCSE Higher Maths

REVISION PACK

- 15 practice exam papers, each with 15 questions
- Answers included
- Space for workings



Contents

Introduction 03

Maths question papers

Paper 1 04

Paper 2 12

Paper 3 20

Paper 4 28

Paper 5 36

Paper 6 44

Paper 7 52

Paper 8 60

Paper 9 68

Paper 10 76

Paper 11 84

Paper 12 92

Paper 13 100

Paper 14 108

Paper 15 116

Answers

Paper 1 124

Paper 2 125

Paper 3 127

Paper 4 129

Paper 5 131

Paper 6 133

Paper 7 135

Paper 8 137

Paper 9 139

Paper 10 141

Paper 11 143

Paper 12 145

Paper 13 147

Paper 14 149

Paper 15 151

Introduction

This pack contains 15 question papers featuring 15 GCSE exam-style questions each. The questions are aimed at Higher tier students and cover a range of topics.

The calculator symbol next to each question shows students whether they should or should not use a calculator to solve it. If the calculator is crossed through, students must calculate their answer by hand.

Each question includes space for workings and a suggested mark. You'll find the answers to each paper at the back of the pack.

We hope you enjoy using this pack. If you have any questions, please get in touch: email support@teachit.co.uk or call us on 01225 788851. Alternatively, you might like to give some feedback for other Teachit members - you can do this by adding a comment on the *GCSE Higher Maths - key skills revision* page (please log in to access this).

1. Evaluate

$$(1.6 \times 10^{-7}) \div (8.0 \times 10^{-3})$$



Write your answer as an ordinary number correct to 3 significant figures.

(2)

A large empty rectangular box with a green border, intended for the student to write their answer to question 1.

2. There are 375 people in an office block.

195 of them are men.

$\frac{3}{5}$ of the men get the train to work.

$\frac{2}{3}$ of the women get the train to work.

Work out how many people get the train to work.

(3)

A large empty rectangular box with a green border, intended for the student to write their answer to question 2.

3. The numbers A and B below are written as the product of prime factors.



Find the highest common factors (HCF) of A and B.

$$A = 2^4 \times 3^2 \times 7^2$$

$$B = 2^3 \times 3 \times 5 \times 7$$

(2)

A large empty rectangular box with a green border, intended for the student to show their working out for finding the HCF of A and B.


4. A laptop has a normal price of £675. In a sale the price is reduced by 30%.



Work out the sale the price of the laptop.

(3)

A large empty rectangular box with a green border, intended for the student to show their working out for finding the sale price of the laptop.

5.  Sanjit buys 5 kg of fruit chews to sell. He pays £10 for the chews. Sanjit puts all the fruit chews into bags. He puts 250 g of chews into each bag and sells each bag for 65p. Sanjit sells all the bags of fruit chews.

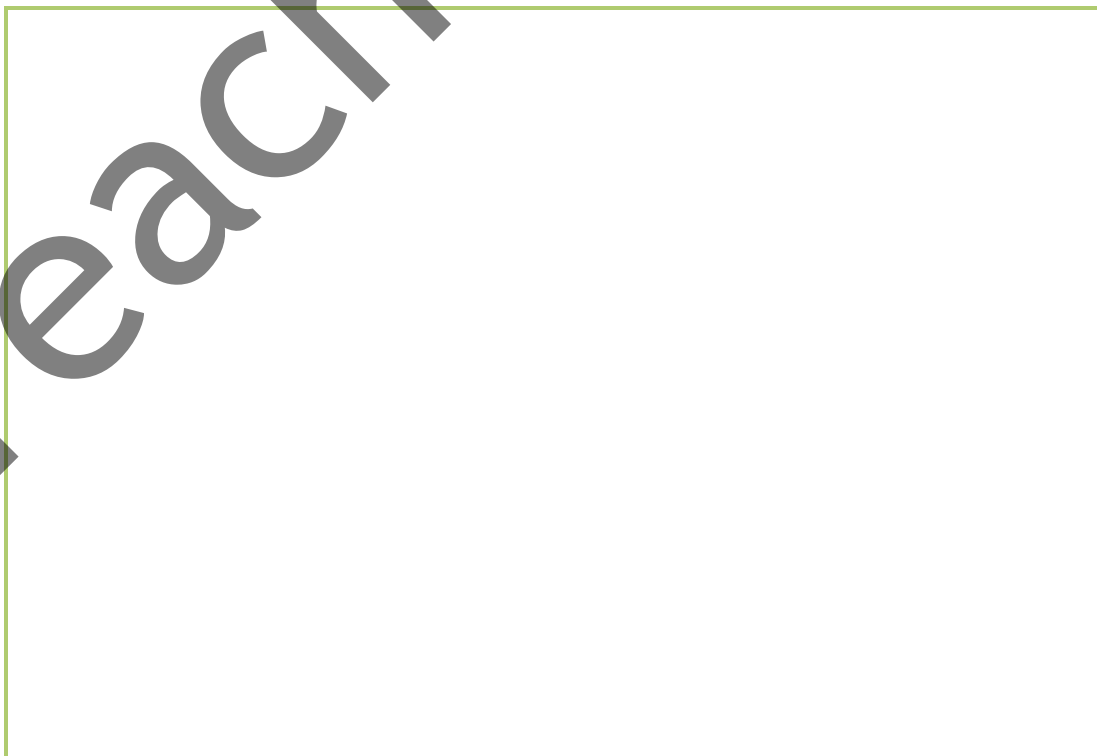
Work out his profit.

(3)



6. The cost of 8 litres of oil is £10.80.
Calculate the cost of 30 litres of oil.

(2)



7. A zoologist measures the lengths of 50 snakes to the nearest centimetre. The results are shown in the frequency table below.

Length (cm)	Frequency
$0 \leq L < 10$	7
$10 \leq L < 20$	12
$20 \leq L < 30$	20
$30 \leq L < 40$	8
$40 \leq L < 50$	3
Total	50

Work out an estimate of the mean length.

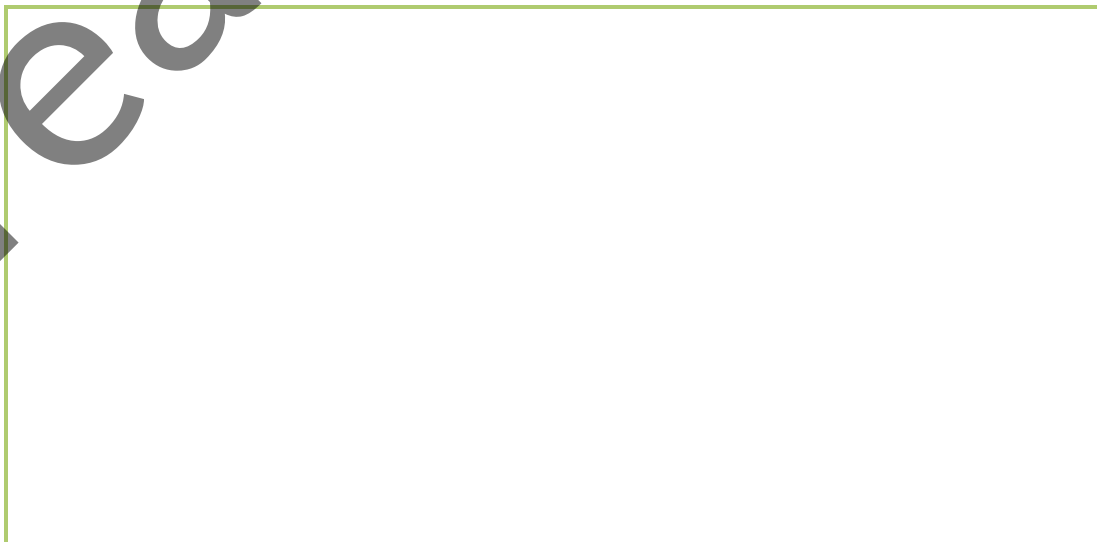
(3)



8. Simplify fully the expression

$$\frac{24a^2w^2}{3a}$$

(2)

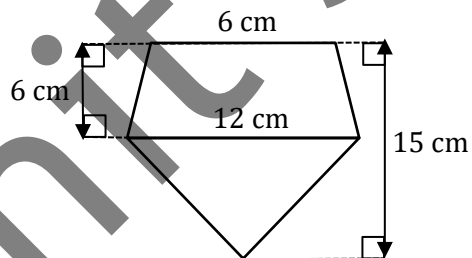


9. Make t the subject of the formula

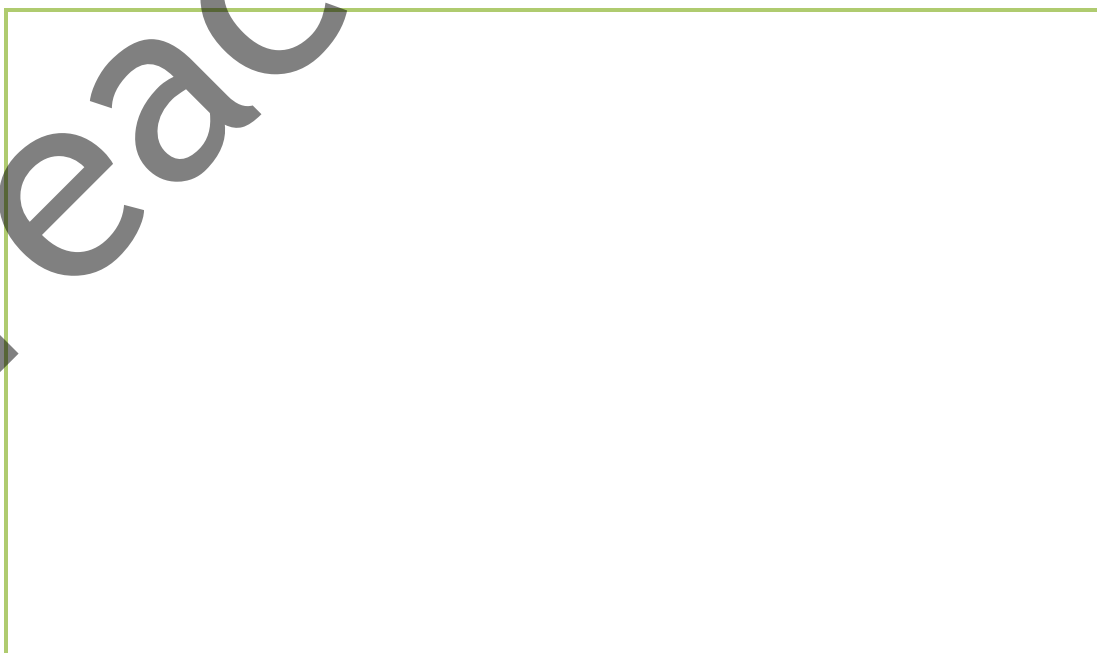
$$v = u + 10t \quad (2)$$



10. Sophia made a logo of two different shapes.
Calculate the area of the logo.



(3)

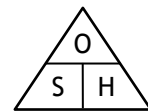
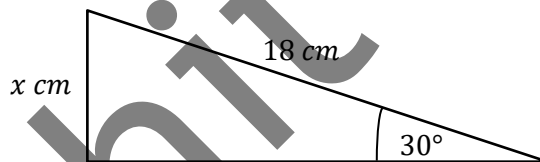


11. Renee leaves £3000 in the bank for two years. It earns compound interest at 2% per year.

Calculate the total amount Renee has in the bank at the end of the two years. (3)



12. Calculate the distance x



(3)



13. Joss rolls a biased dice. The table shows the probability for the different scores.

Score	1	2	3	4	5	6
Probability	0.15	0.25	0.2	0.1	0.15	

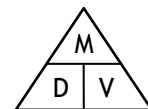
The dice is rolled 200 times.

Estimate the number of times the dice land on a six.

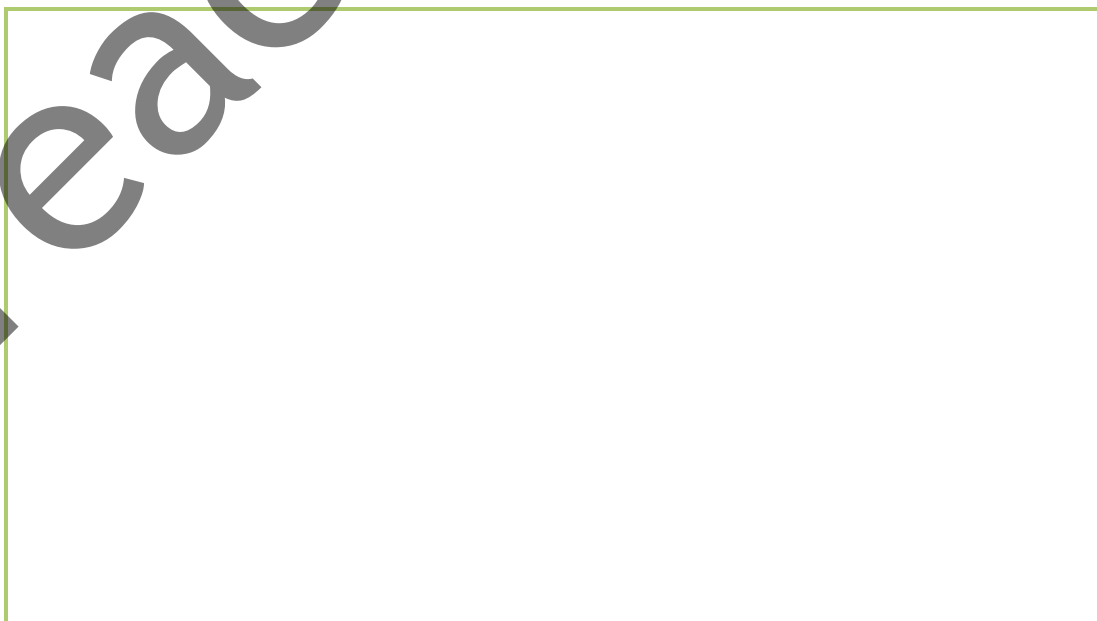
(3)



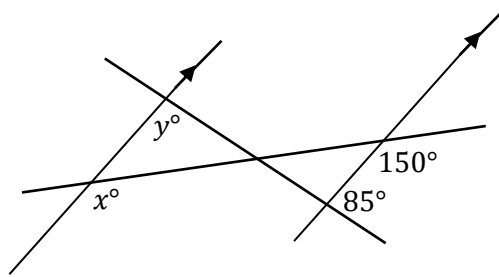
14. A concrete slab is in the shape of a cuboid.
It measures 400 mm by 400 mm by 28 mm.
The density of the concrete is 2250 kg/m^3 .
Calculate the total mass of 60 slabs.



(3)



15. Find the value of the angles x and y below, giving reasons for each answer.



(3)

--

Total

/40