



Class
Maths

Video Solutions



PRACTICE PAPER FOR

Edexcel Paper 2H (June 2024)

----- Disclaimer -----

This paper has been created based on the **most common** paper 2/3 topics from previous years and also careful analysis of what topics have already appeared in paper 1. The paper should be excellent at helping students revise for exams, however should not be relied upon as the basis for revision. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this. Some topics may appear, some may not. Anybody giving you any sort of guarantee is misleading you. If any topics or questions from this paper do come up, this is just lucky guessing and nothing more. 😊

Ultimately the best way to prepare for the exams is to **revise all topics**.

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Answer ALL questions

Write your answers in the spaces provided

You must write down all the stages in your working.

1 Expand and simplify $10(n + 6) - 2(n - 5)$

.....
(Total for Question 1 is 2 marks)

2 (a) Write 8.1×10^{-3} as an ordinary number.

.....
(1)

(b) Write 419 000 in standard form.

.....
(1)

(c) Work out $\frac{9.5 \times 10^{-1}}{1.3 \times 10^{-5} \times 1.1 \times 10^6}$

Give your answer in standard form, correct to 3 significant figures.

.....
(2)

(Total for Question 2 is 4 marks)



3 The table shows information about the speeds of some cars on a road.

Speed, s (mph)	Frequency
$30 < s \leq 40$	1
$40 < s \leq 50$	14
$50 < s \leq 60$	37
$60 < s \leq 70$	48

(a) Find the class interval that contains the median.

.....
(1)

(b) Work out an estimate for the mean speed of the cars.

..... mph
(3)

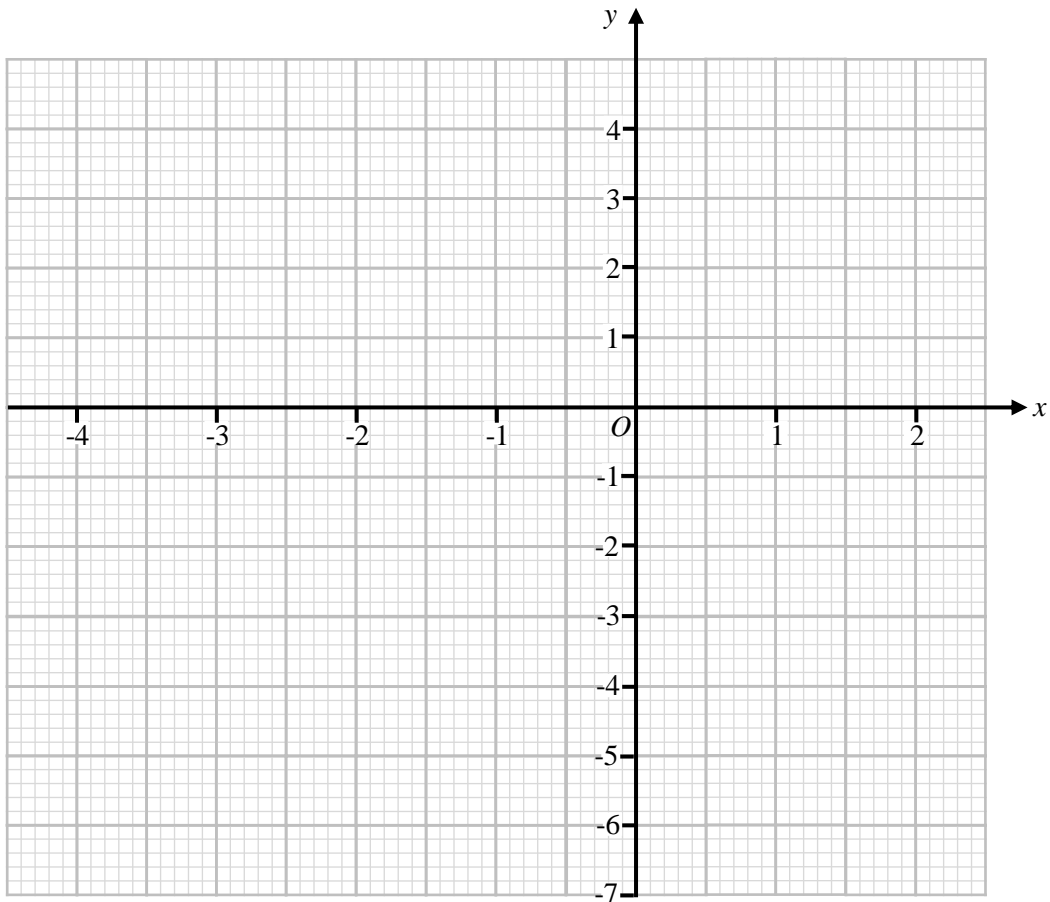
(Total for Question 3 is 4 marks)

4 (a) Complete the table of values for $y = x^2 + 2x - 5$

x	-4	-3	-2	-1	0	1	2
y		-2		-6		-2	3

(2)

(b) On the grid, draw the graph of $y = x^2 + 2x - 5$ for values of x from -4 to 2



(2)

(c) Use your graph to estimate the roots of the equation $x^2 + 2x - 5 = 0$

.....

(2)

(Total for Question 4 is 6 marks)



5 A number, n , is rounded to 2 decimal places.
 The result is 1.79
 Complete the error interval for n .

..... $\leq n <$

(Total for Question 5 is 2 marks)

6 In a bag there are only red, yellow, blue and green counters.
 The table shows the probabilities of taking a counter of each colour.

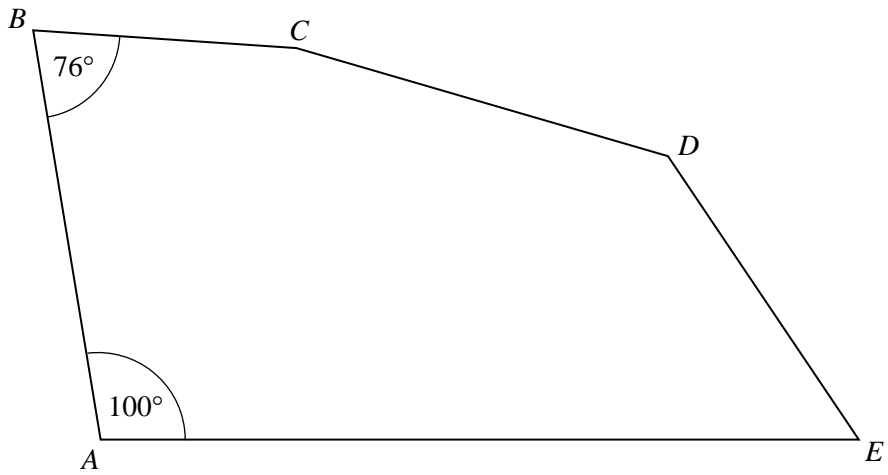
Colour	Red	Yellow	Blue	Green
Probability	0.4	0.04		

Number of blue counters in the bag : number of green counters in the bag = 2 : 5

Complete the table.

(Total for Question 6 is 3 marks)

7 $ABCDE$ is a pentagon.



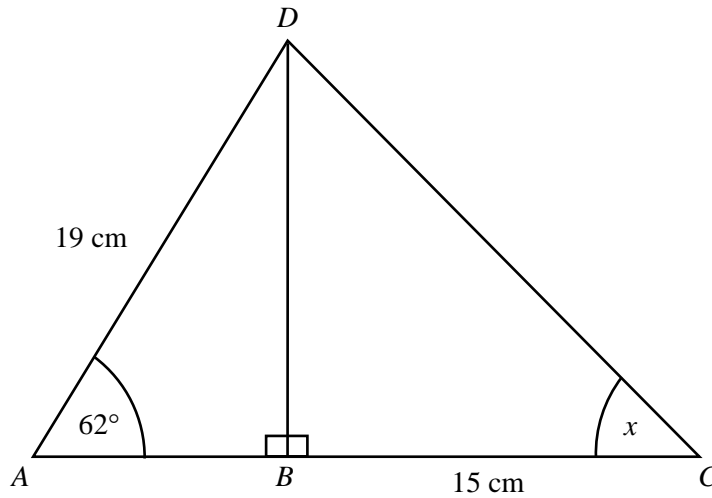
Angle BCD : Angle CDE : Angle DEA = 6 : 5 : 2

Work out the size of angle DEA .

.....
(Total for Question 7 is 4 marks)



8 The diagram shows triangle ADC .



ABC is a straight line.

Work out the size of the angle marked x .
Give your answer correct to 1 decimal place.

.....
(Total for Question 8 is 4 marks)

9 Dee invests £3200 in bank A and Justin invests £3000 in bank B.

Bank A
Compound Interest

1.5% for each year

Bank B
Compound Interest

4.5% for the first year
3.5% for each extra year

After 5 years Justin's bank account will have more money than Dee's.
Work out how much more money will be in Justin's bank account compared to Dee's.

£.....

(Total for Question 9 is 4 marks)

10 (a) Simplify $(27g^9h^{12})^{\frac{1}{3}}$

.....
(2)

(b) Write $\frac{7}{6x^3y} - \frac{1}{8xy^2}$ as a single fraction in its simplest form

.....
(3)

(Total for Question 10 is 5 marks)



11 A school chess club has

- 11 students in Year 7
- 15 students in Year 8
- 13 students in Year 9

Two students from different year groups are selected to play a chess match.

Show that there are more than 500 ways of selecting the two students for the chess match.

(Total for Question 11 is 2 marks)

12 Here is some information about similar solids **X**, and **Y**.

	Height	Surface Area	Volume
X	6 cm	240 cm ²	
Y	7.2 cm		432 cm ³

Complete the table

(Total for Question 12 is 3 marks)

13 Muammar recorded how many minutes he spent revising each day for 15 days.

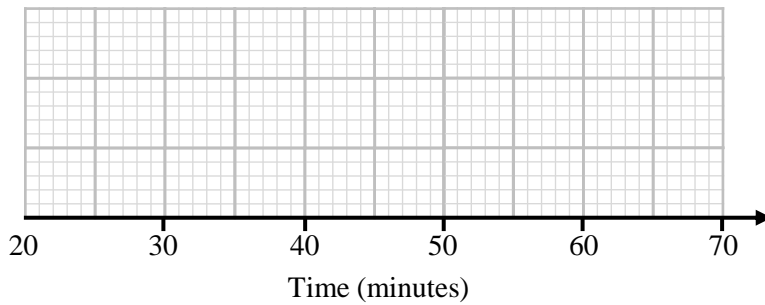
31	37	66	23	55	44	52	47
60	24	50	68	46	39	55	

(a) Complete the table

Lowest Time	
Lower Quartile	
Median	
Upper Quartile	
Highest Time	

(2)

(b) Use your table to draw a box plot for the number of minutes Muammar spent revising.



(2)

(c) Write down the interquartile range of the times.

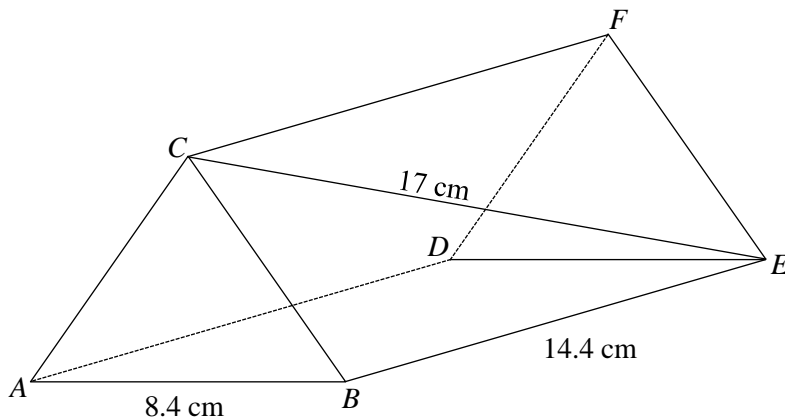
..... minutes

(1)

(Total for Question 13 is 5 marks)



14 Here is a triangular prism.



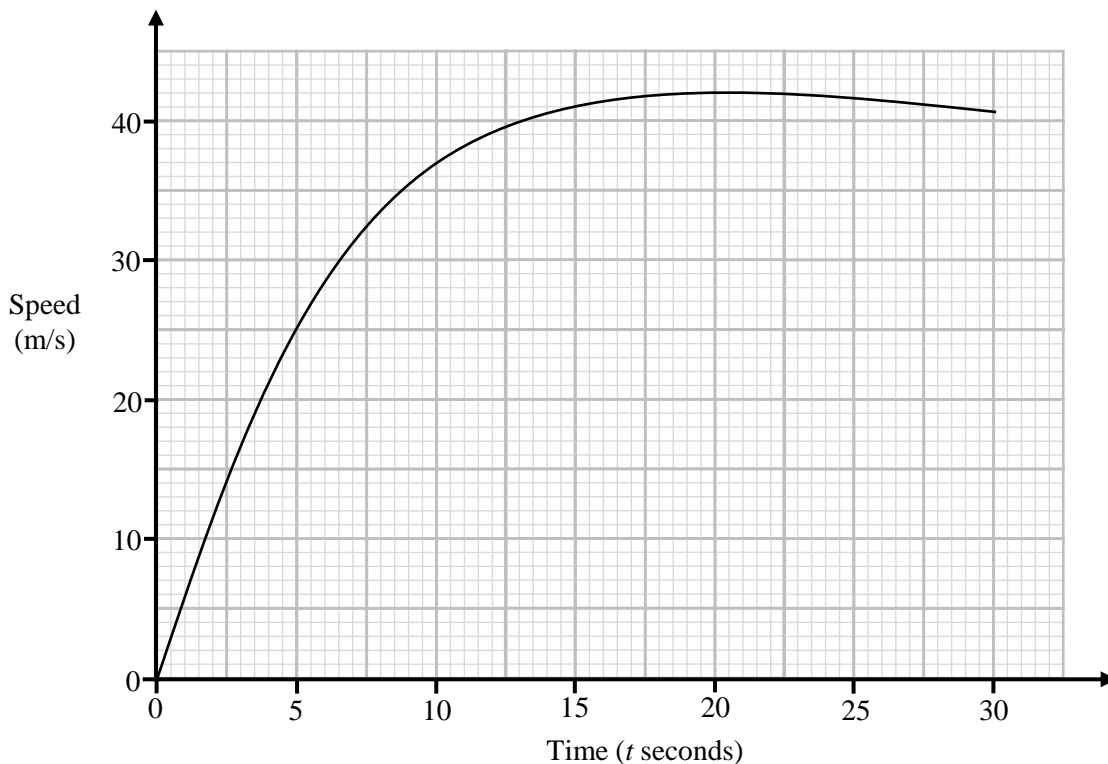
- $AC = BC$
- $AB = 8.4 \text{ cm}$
- $BE = 14.4 \text{ cm}$
- $CE = 17 \text{ cm}$

Work out the volume of the triangular prism.

..... cm^3

(Total for Question 14 is 4 marks)

15 Here is a speed-time graph for a 30 second journey.



(a) Work out an estimate for the acceleration when $t = 10$ seconds.

..... m/s²
(2)

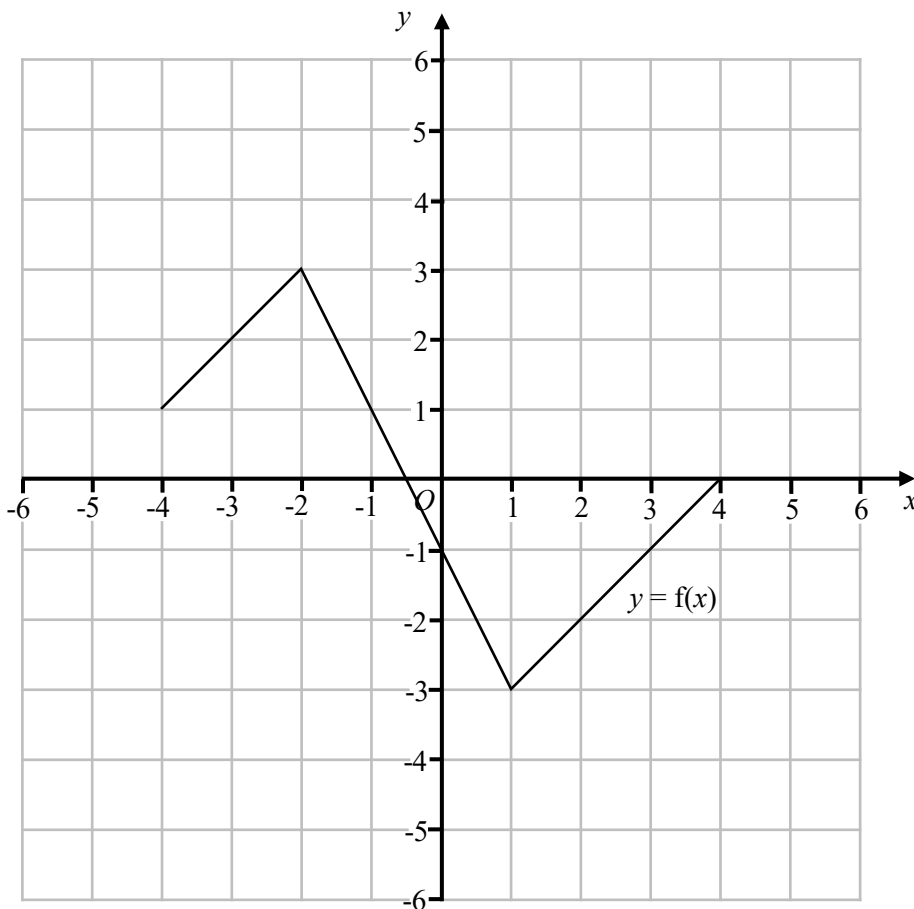
(b) Work out an estimate for the distance travelled in the first 20 seconds.
Use 4 strips of equal width.

..... m
(3)

(Total for Question 15 is 5 marks)



16 The graph of $y = f(x)$ is shown on the grid below.



(a) Draw the graph of $y = f(x - 1) + 2$ onto the grid above. (2)

Point $A(1, -3)$ is on the graph $y = f(x)$

When the graph of $y = f(x)$ is transformed to the graph with equation $y = f(-x)$ the point A is mapped to point B .

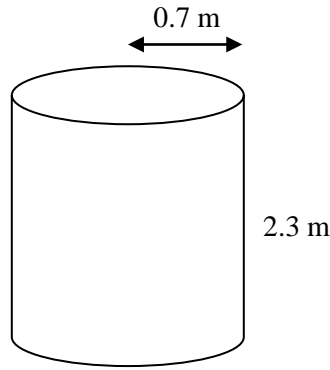
(b) Write down the coordinates of point B .

(.....,))

(1)

(Total for Question 16 is 3 marks)

17 Here is a solid metal cylinder.



The mass of the cylinder is 8300 kg (correct to 2 significant figures)

The height of the cylinder = 2.3 m (correct to 1 decimal place)

The radius of the cylinder = 0.7 m (correct to 1 decimal place)

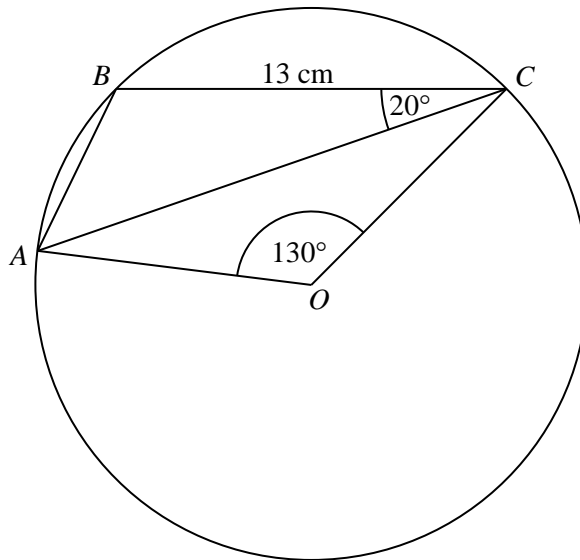
Dylan calculates the density of the cylinder to be 2.9 g/cm^3

Show clearly that Dylan must be incorrect.

(Total for Question 17 is 5 marks)



18 A, B and C are points on the circumference of a circle, centre O .



Work out the area of triangle ABC .
Give your answer to 2 decimal places.

.....cm²
(Total for Question 18 is 5 marks)

19 Here are the first 4 terms of a quadratic sequence.

387 k 892 1167

Work out the value of k .

$k = \dots\dots\dots$

(Total for Question 19 is 4 marks)



20 $f(x) = x^2 - 9$

$g(x) = x - 3$

$h(x) = \frac{x - 8}{3}$

Solve $fg(x) < \frac{g(x) \times h^{-1}(x)}{10}$

.....
(Total for Question 20 is 6 marks)

TOTAL FOR PAPER IS 80 MARKS