


## Year 9 End of KS3 Assessment Revision List Higher: Summer 2026



Paper 1 Topics	Marks	Sparx Code
Writing probabilities as fractions	3	U408
Using a written method to multiply integers	3	U127
Interpreting stem-and-leaf diagrams	4	U909
Solving direct proportion word problems	3	U721
Solving equations with two or more steps	3	U325
Calculating with roots and powers	1	U851
Translation	2	U196
Position-to-term rules for arithmetic sequences	2	U498
Adding and subtracting mixed numbers	2	U793
Multiply with mixed numbers, Convert mixed numbers & improper fractions	1	U224,U692
Finding the area of compound shapes, Solving direct proportion word problems	4	U970,U721
Solving direct proportion word problems	1	U721
Venn diagrams with set notation	3	U748
Estimating calculations	4	U225
Finding equations of straight line graphs	3	U315
Equations of parallel lines	1	U377
Fractions of amounts, Combining ratios, Convert between fractions & percentages	5	U881,U921,U888
Finding original values in percentage calculations	2	U286
Solving inequalities with the unknown on both sides	3	U738

Paper 2 Topics	Marks	Sparx Code
Simplifying expressions using index laws	1	U662
Solving equations with two or more steps	2	U325
Drawing pie charts	3	U508
Interpreting pie charts	1	U172
Writing probabilities as fractions, decimals and percentages	4	U510
Calculating speed from distance-time graphs	2	U462
Plotting distance-time graphs	1	U403
Finding percentages of amounts	3	U349
Finding the volume and the surface area of cubes and cuboids	3	U786, U929
Reading and drawing inequalities on number lines	3	U509
Prime factor decomposition	2	U739
Finding the HCF and LCM using prime factor decomposition	2	U250
Sharing amounts in a given ratio	3	U577
Area of circles, Area of compound shapes	4	U950, U575
Solving direct proportion word problems	1	U721
Constructing loci	1	U820
Finding fractions of amounts	3	U881, U916
Calculating the mean, Using equivalent ratios to find unknown amounts	5	U291, U753
Finding unknown angles in right-angled triangles	2	U545
Calculating with density, Converting units of length, mass and capacity	3	U910, U388
Sketching quadratic graphs	2	U310
Special sequences	3	U680

 THINKING SCHOOLS ACADEMY TRUST	<b>Full Name:</b>	
	<b>Teacher Name:</b>	

Year 9

End of Key Stage 3 Programme of Study Assessment 2024

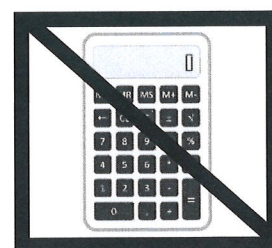
# PRACTICE PAPER

## Paper 1 (Non-Calculator)

### Higher Tier

#### Instructions

- Use black ink or ball point pen
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B)
- **Fill in the boxes** at the top of this page with your name and teacher name
- Answers **all** questions
- Answer the questions in the spaces provided
  - There may be more space than you need
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**



#### Information

- The total mark for this paper is **54 marks**
- The marks for each question are shown in brackets
  - Use this as a guide as to how much time to spend on a question.

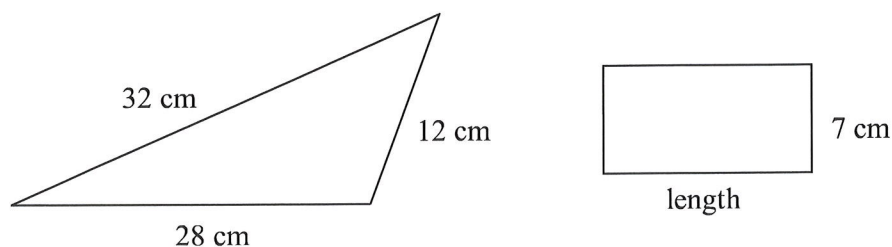
**Answer ALL questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

**The paper is designed to start on Q12; this is not an error**

- 12** The diagram shows a triangle and a rectangle.



The perimeter of the rectangle is half the perimeter of the triangle.

Work out the length of the rectangle.

..... cm

**(Total for Question 12 is 4 marks)**

---

13 There are an equal number of £10 notes and £20 notes in a wallet.

Rose takes at random a note from the wallet.

(a) Write down the probability that Rose takes a note with a value of more than £20

.....  
(1)

There are only 10p coins and 20p coins in a bag.

The total value of the coins in the bag is £6

The total value of the 10p coins is the same as the total value of the 20p coins.

Solly takes at random a coin from the bag.

(b) Find the probability that Solly takes a 20p coin.

.....  
(2)

**(Total for Question 13 is 3 marks)**

14 Work out  $374 \times 56$

.....  
**(Total for Question 14 is 3 marks)**

---

- 15 Theresa recorded the ages of 15 people who visited the opera one evening. She showed her results in a stem and leaf diagram.

3	5	9			
4	3	7	8		
5	1	2	4	5	7
6	2	6	7		
7	1				

Key:  
3 | 5 represents 35 years

- (a) Find the median.

..... years  
**(1)**

- (b) Find the range.

..... years  
**(2)**

Theresa also recorded the ages of 15 people who went to the cinema on the same evening.

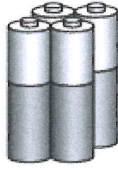
For the people who visited the cinema, the median age was 32 years.

- (c) Compare the ages of the people who went to the opera with the ages of the people who went to the cinema.

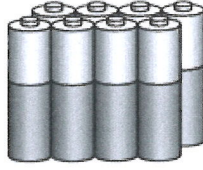
.....  
 .....  
 .....  
**(1)**

**(Total for Question 15 is 4 marks)**

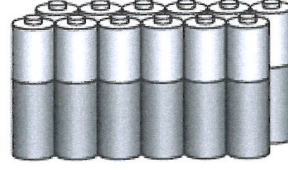
16 Batteries are sold in packs of 4, in packs of 8 and in packs of 12



£2.20



£4.20



£6.20

A pack of 4 batteries costs £2.20

A pack of 8 batteries costs £4.20

A pack of 12 batteries costs £6.20

Which pack gives the best value for money?

You must show how you get your answer.

**(Total for Question 16 is 3 marks)**

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17 Solve  $3(2x - 8) = 18$

$x = \dots\dots\dots$

**(Total for Question 17 is 3 marks)**

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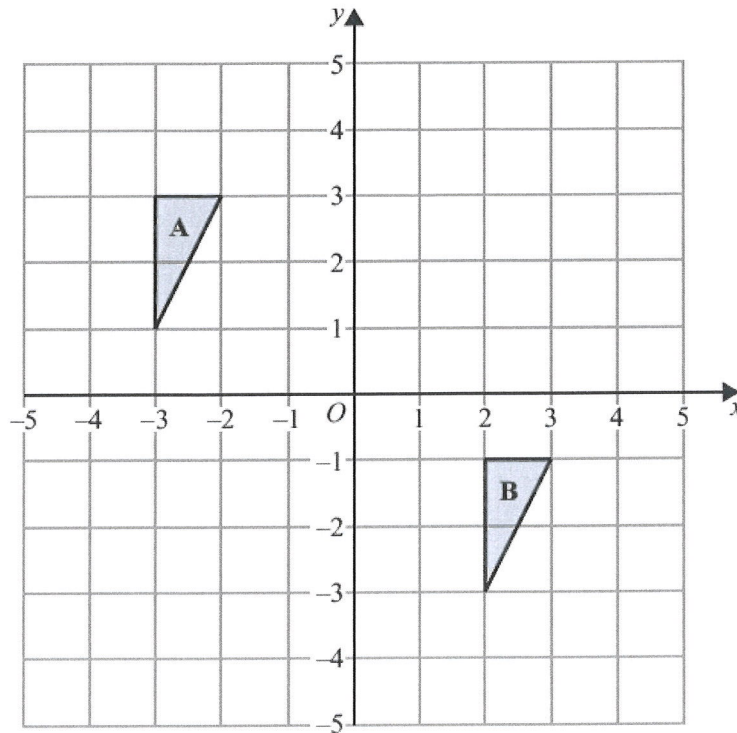
18 Write down the value of  $2^0$

$\dots\dots\dots$

**(Total for Question 18 is 1 mark)**

---

19



Describe fully the **single** transformation that maps triangle **B** onto triangle **A**.

.....

.....

.....

(Total for Question 19 is 2 marks)

---

20 Here are the first four terms of an arithmetic sequence.

7      12      17      22

Find an expression, in terms of  $n$ , for the  $n$ th term of this sequence.

.....

(Total for Question 20 is 2 marks)

---

21 (a) Work out  $4\frac{3}{5} - 2\frac{1}{4}$

.....  
(2)

Kora was asked to work out  $2\frac{2}{5} \times \frac{4}{7}$

Here is her working and her answer.

$$\begin{aligned} 2\frac{2}{5} \times \frac{4}{7} &= \frac{12}{5} \times \frac{4}{7} \\ &= \frac{84}{20} \\ &= 4\frac{4}{20} \end{aligned}$$

Kora's answer is wrong.

(b) What mistake has Kora made?

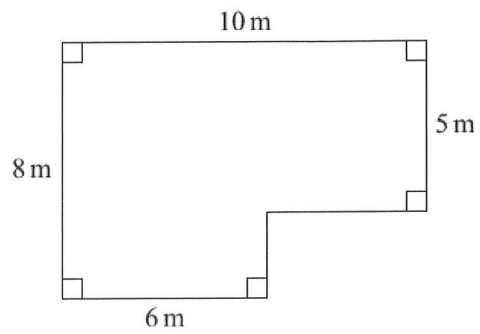
.....  
.....  
.....

(1)

**(Total for Question 21 is 3 marks)**

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- 22 The diagram shows a plan of a floor.



Peter is going to cover the floor with paint.

Peter has 4 tins of paint.

There are 1.5 litres of paint in each tin.

Peter thinks 1 litre of paint will cover  $10 \text{ m}^2$  of floor.

- (a) Assuming Peter is correct, does he have enough paint to cover the floor?  
You must show all your working.

(4)

Actually, 1 litre of paint will cover  $12 \text{ m}^2$  of floor.

- (b) Does this affect your answer to part (a)?  
You must give a reason for your answer.

.....

.....

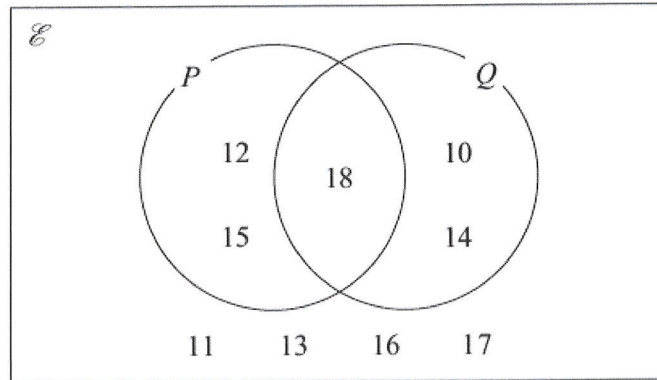
.....

**(1)**

**(Total for Question 22 is 5 marks)**

---

23 Here is a Venn diagram.



(a) Write down the numbers that are in set  $Q'$

.....  
(1)

A number is chosen at random from the universal set,  $\mathcal{E}$

(b) Find the probability that this number is in the set  $(P \cup Q)'$

.....  
(2)

(Total for Question 23 is 3 marks)

24 Stan drives a distance of 2043 kilometres on motorways in Germany.  
He pays 0.92 euros for every 100 kilometres he drives.

(a) Work out an estimate for the total amount that Stan pays.

..... euros  
(3)

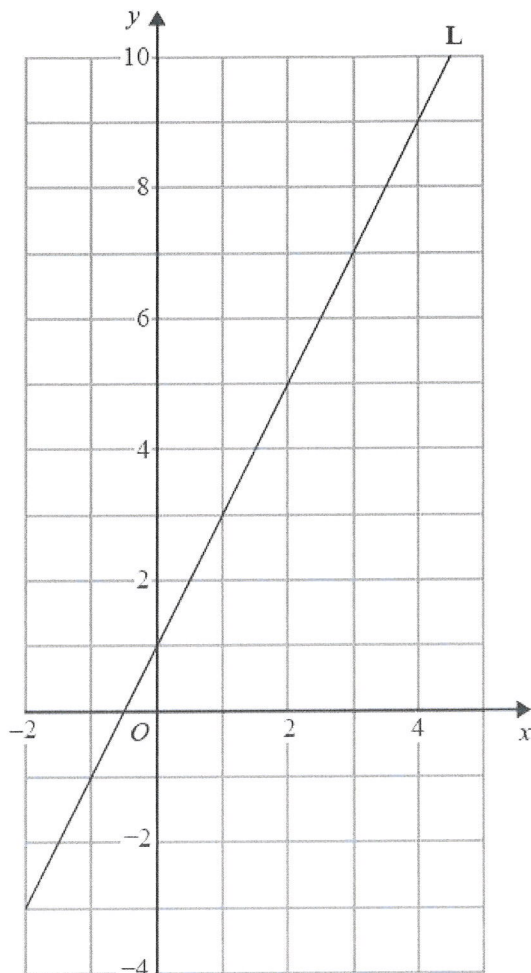
(b) Is your answer to part (a) an underestimate or an overestimate?  
Give a reason for your answer.

.....  
.....  
.....  
(1)

(Total for Question 24 is 4 marks)

---

25 Here is a straight line L drawn on a grid.



(a) Find an equation for L.

.....  
(3)

M is a different straight line with equation  $y = 3x$

(b) Write down the equation of a straight line parallel to M.

.....  
(1)

(Total for Question 25 is 4 marks)

26 Keisha has some small bottles, some medium bottles and some large bottles.  
She has a total of 600 bottles.

$\frac{3}{5}$  of the 600 bottles are green.

For the green bottles,

number of small bottles : number of medium bottles = 4 : 3

number of medium bottles : number of large bottles = 3 : 5

Work out the percentage of Keisha's bottles that are medium green bottles.

.....%

**(Total for Question 26 is 5 marks)**

---

27 In a sale, normal prices are reduced by 25%

The sale price of a games console is £225

Work out the normal price of the games console.

£.....

**(Total for Question 27 is 2 marks)**


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28 Solve  $x + 12 \leq 2 - \frac{3}{2}x$

.....  
**(Total for Question 28 is 3 marks)**

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**TOTAL FOR PAPER IS 54 MARKS**

 THINKING SCHOOLS ACADEMY TRUST	Full Name:	
	Teacher Name:	

Year 9  
End of Key Stage 3 Programme of Study Assessment 2026

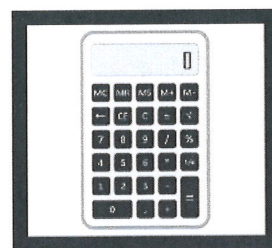
# PRACTICE PAPER

## Paper 2 (Calculator)

### Higher Tier

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J25P2F – TSATP2H PRACTICE PAPER

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

The paper is designed to start on Q13; this is not an error

13 (a) Simplify  $a \times a \times a$

.....  
(1)

(b) Solve  $4g - 5 = 23$

$g =$  .....  
(2)

(Total for Question 13 is 3 marks)

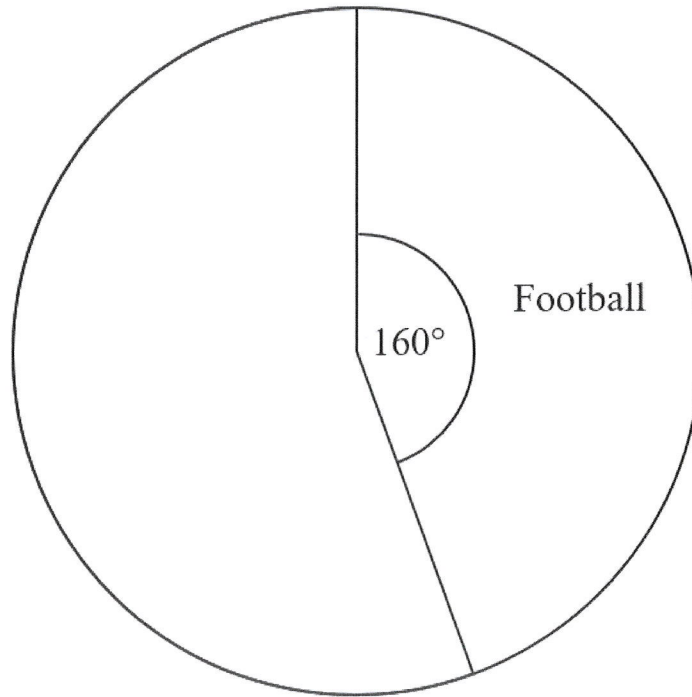
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14 90 students in Year 11 each choose one sport for a PE lesson.

The table below shows information about their choices.

Sport	Number of students
Football	40
Netball	35
Tennis	15

(a) Complete the accurate pie chart to show this information.



(3)

In another pie chart the number of students in Year 10 playing football is represented by an angle of  $180^\circ$

Ewan says,

“This means that football was chosen by more students in Year 10 than by students in Year 11”

(b) Is Ewan correct?  
Explain why you think this.

.....  
.....  
.....

(1)

(Total for Question 14 is 4 marks)

15 There are 30 pens in a box.

There are

- 9 blue pens
- 13 green pens
- 8 red pens.

Jack puts 14 more pens in the box.

These pens are either blue pens or red pens.

Jack is going to pick at random one pen from the box.

The probability that this pen will be blue is  $\frac{1}{4}$

How many more red pens did Jack put in the box?

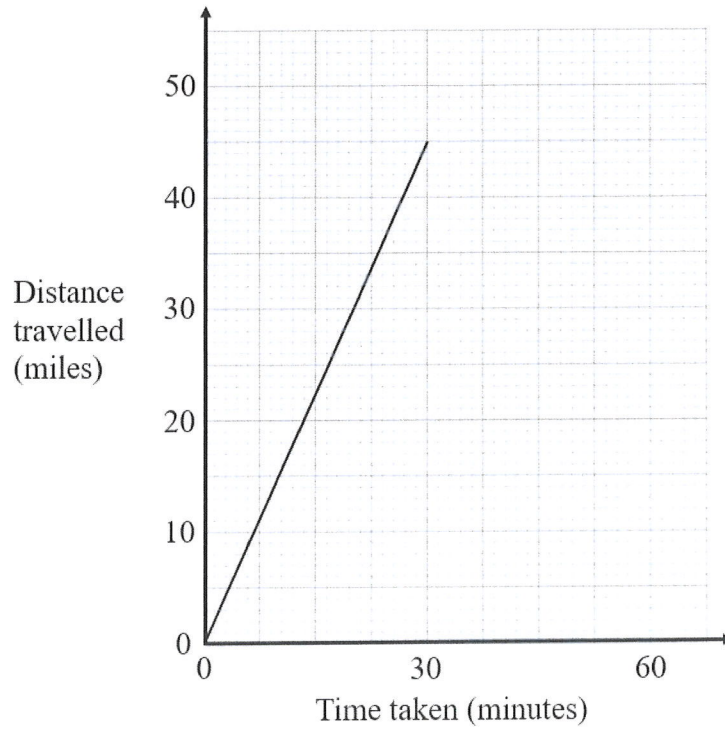
You must show all your working.

.....  
(Total for Question 15 is 4 marks)

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16 A train travels from York to Retford.

The travel graph shows information about the train's journey.



- (a) Work out the speed of the train.  
Give your answer in miles per hour.

..... miles per hour  
(2)

The train stays at Retford for 15 minutes.

- (b) Show this information on the travel graph.

(1)

**(Total for Question 16 is 3 marks)**

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- 17 A primary school needs a new roof.  
The cost of the roof is £23 000  
A grant will pay 65% of this cost.  
The school will pay the rest of the cost.

Work out how much the school will pay.

£.....

**(Total for Question 17 is 3 marks)**

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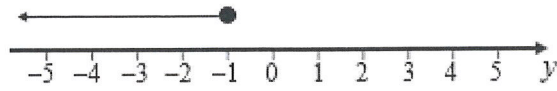
- 18 A cube has a volume of  $729 \text{ cm}^3$   
Work out the surface area of the cube.

.....  $\text{cm}^2$

**(Total for Question 18 is 3 marks)**

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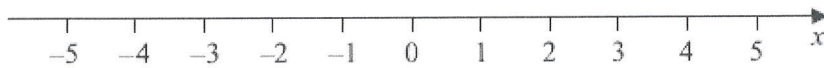
19 Here is an inequality in  $y$  shown on a number line.



(a) Write down the largest possible integer value for  $y$ .

.....  
(1)

(b) On the number line below, show the inequality  $-3 < x \leq 4$



(2)

**(Total for Question 19 is 3 marks)**

---

20 (a) Express 140 as a product of its prime factors.

.....  
(2)

(b) Find the lowest common multiple (LCM) of 40 and 15

.....  
(2)

**(Total for Question 20 is 4 marks)**

---

- 21 Mia, Nic and Phil share £7200 in the ratio 5 : 3 : 2  
Work out how much money each person receives.

Mia £.....

Nic £.....

Phil £.....

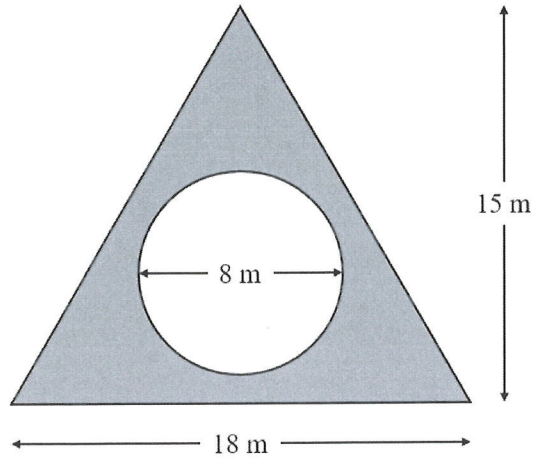
**(Total for Question 21 is 3 marks)**

---

22 Here is a plan of part of Shey's garden.

There is a circle inside a triangle.

The circle has a diameter of 8 m.



They will cover the shaded area with grass.

Grass seed is sold in bags.

Each bag of grass seed covers an area of  $15 \text{ m}^2$

(a) Work out the number of bags of grass seed They will need.

..... bags  
(4)

She finds that each bag of grass seed only covers an area of  $13 \text{ m}^2$

(b) How does this affect your answer to part (a)?

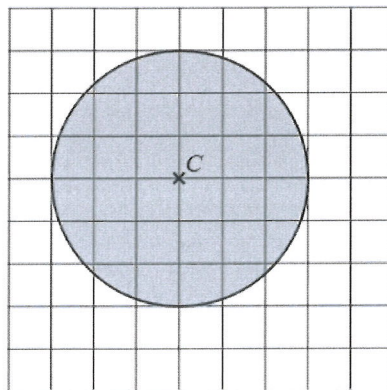
.....  
.....  
.....

(1)

**(Total for Question 22 is 5 marks)**

---

23 The point  $C$  is shown on a centimetre grid.



A point  $P$  is at least 3 cm from the point  $C$ .

Claire is asked to shade the region where point  $P$  could be.

Her answer is shown on the grid.

Explain the mistake Claire has made.

.....  
.....  
.....

**(Total for Question 23 is 1 mark)**

---

- 24 This year the total weight of carrots grown on a farm is  $\frac{1}{5}$  less than last year.  
This year the total weight of carrots grown is 6400 tonnes.  
Work out the total weight of carrots grown last year.

..... tonnes

**(Total for Question 24 is 3 marks)**

---

**25** Here are two lists of numbers.

List **A**    237    300    124    251

List **B**    586    400    367     $x$     521    660

mean of list **A** : mean of list **B** = 3 : 7

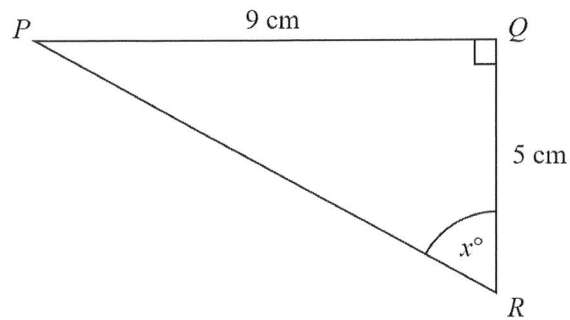
Work out the value of  $x$ .

$x =$  .....

**(Total for Question 25 is 5 marks)**

---

26  $PQR$  is a right-angled triangle.



Calculate the value of  $x$ .  
Give your answer correct to 1 decimal place.

$x = \dots\dots\dots$

**(Total for Question 26 is 2 marks)**

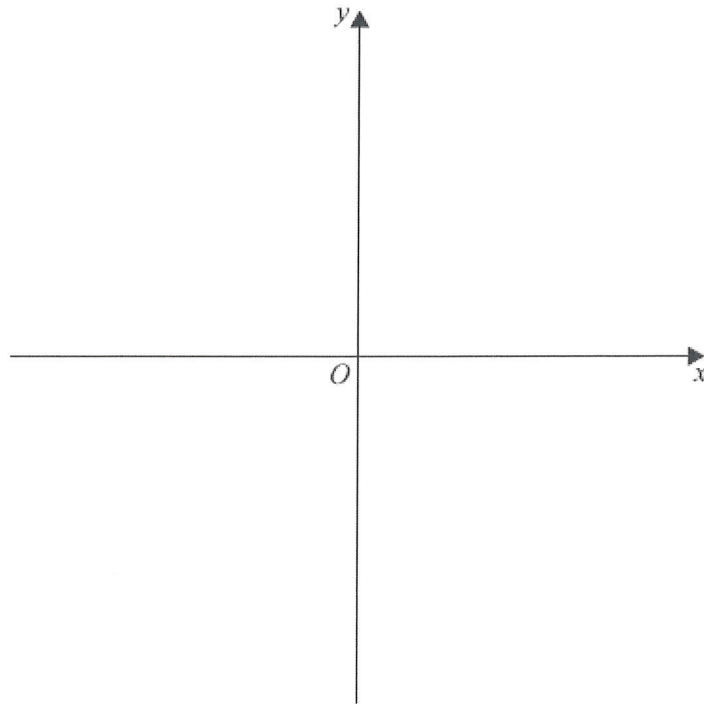
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27 Metal rods are made from iron with density  $8\text{ g/cm}^3$   
Each metal rod has a volume of  $2500\text{ cm}^3$   
The maximum mass of metal rods that can be put on a trolley is  $600\text{ kg}$ .  
Work out the greatest number of metal rods that can be put on the trolley.

$\dots\dots\dots$   
**(Total for Question 27 is 3 marks)**

---

28 Sketch the graph of  $y = x^2 + 3$



(Total for Question 28 is 2 marks)

---

29 The first three terms of a Fibonacci sequence are

$$f \quad 4f \quad 5f$$

The 5th term of this sequence is 448

Work out the value of  $f$ .

$$f = \dots\dots\dots$$

(Total for Question 29 is 3 marks)

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**TOTAL FOR PAPER IS 54 MARKS**