



SIR WILLIAM PERKINS'S SCHOOL

Year 7 Mathematics Entrance Examination

Sample Paper

September 2026 Intake

Instructions for Candidates:

- Answer all questions in the spaces provided on the paper.
- This paper is divided into two parts:
Part 1 – General Skills
Part 2 – Problem Solving
- You have **1 hour** to complete the paper.
Try to spend about **30 minutes on each part**.
- Show all your working clearly, as **marks may be awarded for your methods**.
- If you find a question too difficult, leave it and move on to the next one.
You can come back to it later if you have time.

Name:

School:

General Skills

Question 1

Calculate

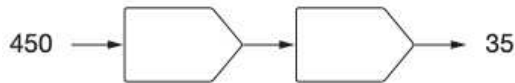
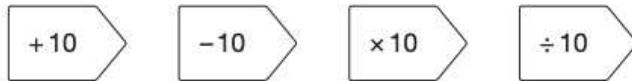
$$486 \div 3$$

.....

Question 2

Fill in the boxes to complete the number chain.

Use any of the following:



First:

Then:

Question 3

Calculate

$$50 + (36 \div 6)$$

.....

Question 4

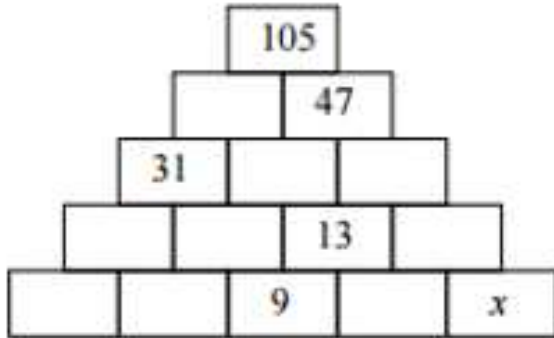
What is $(999 - 99 + 9) \div 9$?

.....

Question 5

In this partly completed pyramid, each rectangle is to be filled with the sum of the two numbers in the rectangles immediately below it.

What number should replace x ?



.....

Question 6

$$5,542 \div 17 = 326$$

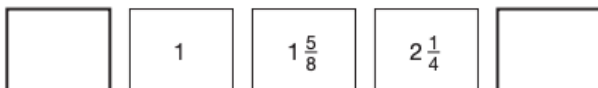
Explain how you can use this fact to find the answer to 18×326 .

.....

Question 7

The numbers in this sequence increase by the same amount each time.

Write the missing numbers.



First =, Last =

Question 8

Two decimal numbers add together to equal 1
One of the numbers is 0.007

What is the other number?

.....

Question 9

Match each fraction to the correct decimal card.
The first one has been done for you.

$\frac{3}{10}$

0.03

$\frac{3}{5}$

0.06

$\frac{3}{100}$

0.3

$\frac{3}{50}$

0.6

$\frac{3}{5} = \dots\dots\dots$

$\frac{3}{100} = \dots\dots\dots$

$\frac{3}{50} = \dots\dots\dots$

Question 10

These are some radio programmes one morning.

7:00	Music show
7:55	Weather report
8:00	News
8:15	Travel news
8:25	Sport
8:45	Holiday programme

The Holiday programme lasts for 40 minutes.

At what time does the Holiday programme finish?

.....

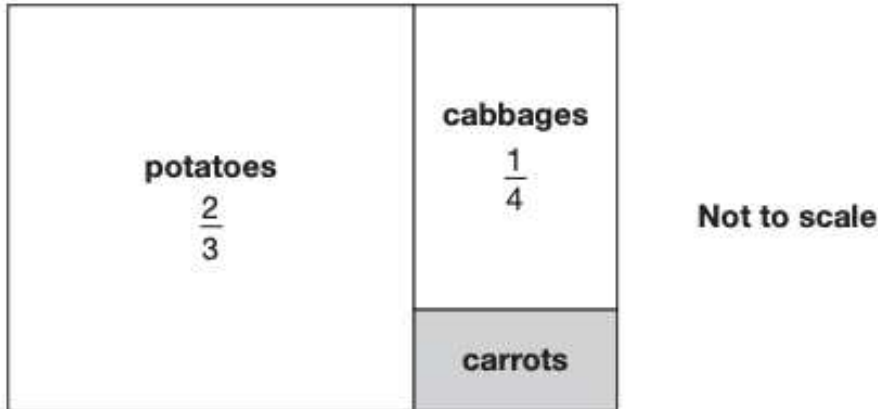
Question 11

The numbers in this sequence increase by the same amount each time.
Write in the missing numbers.

1			13
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Question 12

This is a diagram of a vegetable garden. It shows the fractions of the garden planted with potatoes and cabbages. The remaining area is planted with carrots.



What fraction of the garden is planted with carrots?

Question 13

This table shows when flights take off at an airport.

Flight number	Destination	Take-off time
AX40	Paris	13:35
BH253	Berlin	14:05
CG008	Rome	15:25
DP369	Paris	15:40
EZ44	Lisbon	16:15
FJ994	Dublin	17:25

The flight to Dublin takes 50 minutes.
What time does it arrive in Dublin?

.....

Question 14

Some children were asked to choose their favourite animal in the zoo.
This table shows the results.

	Girls	Boys
Zebra	9	3
Lion	4	9
Giraffe	7	4
Monkey	8	7
Elephant	6	5

How many more girls than boys chose giraffes?

.....

Question 15

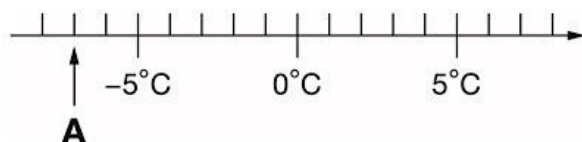
A shop sells school uniform. How much does **one jumper** cost?

Two shirts and one jumper cost £29
One shirt and one jumper cost £21

£

Question 16

Here is part of a temperature scale.

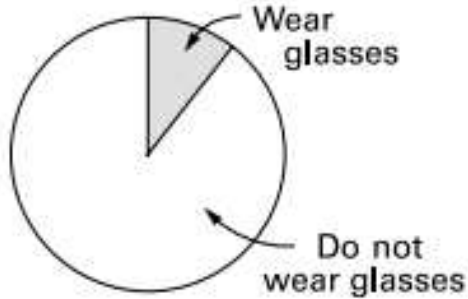


What is the temperature shown at **A**?

..... °C

Question 17

There are 60 pupils in a school.
6 of these pupils wear glasses.



The pie chart is not drawn accurately.
What should the angles be?

..... °
..... °

Question 18

A spinner has **eight** equal sections.



What is the probability of scoring an **even** number on the spinner?

.....

Question 19

The number **20** goes in **two** of the squares of this multiplication grid.

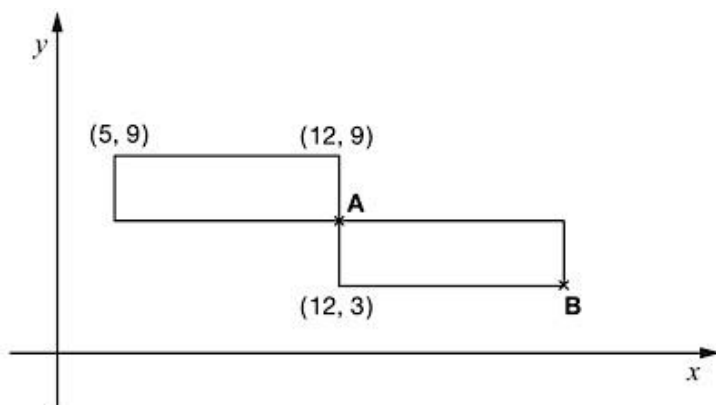
×	1	2	3	4	5
1					
2					
3					
4					
5					

In which two squares would 20 go?

.....
.....

Question 20

This diagram shows two **identical** rectangles on coordinate axes.



Write the coordinates of point **A**.

A is (..... ,)

ANSWER KEY

Question 1

162

Question 2

First: $\div 10$ OR $\div 10$ OR $/10$ OR $/ 10$ OR divide by 10 OR divide 10 OR divide OR \div
Then: -10 OR $- 10$ OR $- 10$ OR -10 OR minus 10 OR take away 10 OR take 10 OR subtract 10

1m $\div 10 \longrightarrow - 10$

Question 3

56

Question 4

101

$$(999 - 99 + 9) \div 9 = (900 + 9) \div 9 = 909 \div 9 = 101.$$

Question 5

3

The calculations required to find the value of x are:

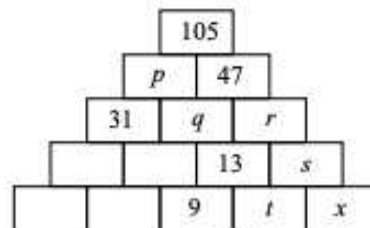
$$p = 105 - 47 = 58; q = p - 31 = 58 - 31 = 27;$$

$$r = 47 - q = 47 - 27 = 20;$$

$$s = r - 13 = 20 - 13 = 7; t = 13 - 9 = 4;$$

$$x = s - t = 7 - 4 = 3.$$

(Note that the problem may be solved without finding the values of four of the numbers in the pyramid. Finding these is left as an exercise for the reader.)



Question 6

add 326 OR +326 OR + 326 OR add one more 326 OR add on 326 OR [add OR +] AND 326

Question 7

$$\text{First} = \frac{3}{8}, \text{Last} = 2\frac{7}{8}$$

Question 8

0.993

Question 9

$$\frac{3}{5} = 0.6$$

$$\frac{3}{100} = 0.03$$

$$\frac{3}{50} = 0.06$$

9 Fractions connected correctly to decimals as shown:

$\frac{3}{10}$	$\frac{3}{100}$	$\frac{3}{50}$	0.03	0.06	0.3	0.6
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1m

Question 10

9:25 OR 9:25am OR [9 AND 25 AND am]OR [9 AND 25]

4b	9:25 am	1m
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Question 11

1	5	9	13
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12	1 5 9 13	1m
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Question 12

$$\frac{1}{12}$$

Question 13

18:15 OR 6:15

11c	18:15	1m	The answer is a specific time (see page 5 for guidance). Accept 6:15
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Question 14

3

5a	3	1m	
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Question 15

£13

2m	£13
or	
1m	Shows the value 8
	or
	Shows or implies a complete correct method with not more than one computational error
	eg
U1	• $21 - (29 - 21)$
	• $29 - 21 = 7$ (error), $21 - 7 = 14$

Question 16

-7°C

13a	-7°C	1m	Do not accept 7=
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Question 17

36°

324°

2m	Both values correct, ie 36 and 324, in either order.
or	
1m	One correct value
	or
	Both values sum to 360, but none are 0, 90 or 180

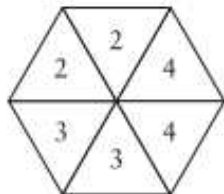
Question 18

1

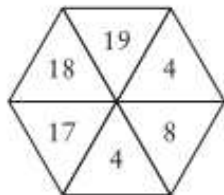
2m Shows exactly two fours, exactly two even numbers other than four, and any two odd numbers

eg

■



■



or

1m Shows exactly two fours

or

Shows exactly four even numbers, even if the other two entries are left blank

Question 19

4 OR [5] AND [4]

5 OR [4] AND [5]

4	Grid completed as shown:	1m	Accept alternative unambiguous indications, eg 20 written only in the correct squares.																																				
	<table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td>x</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> </tr> </table>	x	1	2	3	4	5	1						2						3						4					✓	5				✓			
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Question 20

(12, 6)

20a:	A is (12, 6)	1m	Coordinates must be given in the correct order.
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