11+

Practice Test

Set A: Paper 2

Read the following:

Do not open this booklet or start the test until you are told to do so.

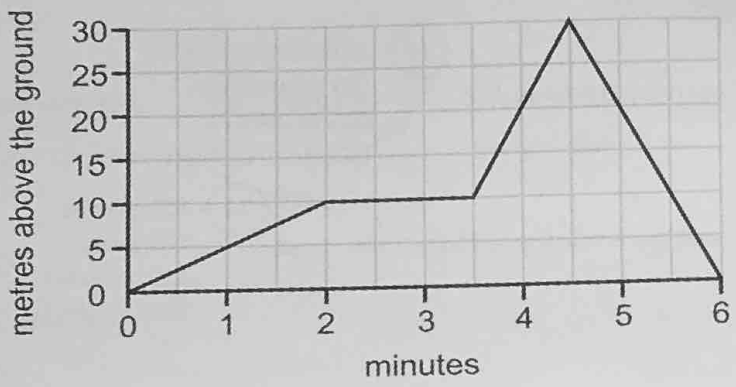
1. This test can be taken in either multiple-choice or write-in format.
2. If you are taking it as a multiple-choice test you should mark your answer to each question in pencil on the separate answer sheet. Mark the correct box quickly and neatly using a horizontal line.
3. If you are taking it as a write-in test you should write your answer to each question in pencil on the paper. Write your answer carefully in the space provided or, if there is a range of options, mark the correct box quickly and neatly using a horizontal line.
4. If you make a mistake, rub it out and mark your new answer clearly.
5. There are three sections in this test.
6. The time allowed for each section is given at the start of that section. You will have a total of 45 minutes to complete the timed sections of the test.
7. Each section includes examples showing you how to answer the questions. You may refer to these examples at any time as you work through the section.
8. Do as many questions as you can. For some questions you will be given a range of options — if you get stuck on one of these questions, choose the answer that you think is most likely to be correct, then move on to the next question. If you get stuck on a question for which no options are given, leave it and move on to the next question. If you have time at the end of the section, go back and have another go at the questions you could not answer.
9. You should do any rough working on a separate piece of paper.

Work carefully, but go as quickly as you can.

SECTION 2: NUMERICAL REASONING

READ THESE EXAMPLE QUESTIONS. YOU MAY RETURN TO THESE EXAMPLES AT ANY TIME AS YOU WORK THROUGH THIS SECTION.

A George draws a graph showing a flight by his remote-control model plane.



A1 How long did the flight last?

6 minutes

A2 How high was the plane after 4 minutes of flight?

2 0 m

A3 According to the graph, what was the plane doing between 3½ and 4½ minutes of flight?

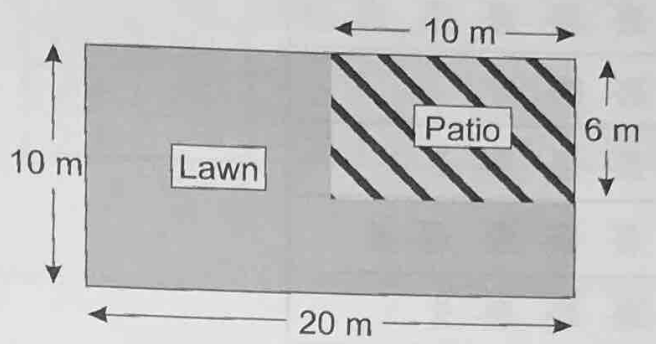
speeding up	rising	slowing down	falling
☐	■	☐	☐

WAIT UNTIL YOU ARE TOLD TO GO ON

YOU HAVE 25 MINUTES TO COMPLETE THIS SECTION

THERE ARE 9 MULTI-PART QUESTIONS IN THIS SECTION

1 Here is a diagram of Martin's back garden.



a) What is the area of Martin's lawn?

☐☐☐ m^2

b) Martin digs up 20 m^2 of his lawn to make a flower bed.
What fraction is this of Martin's lawn?

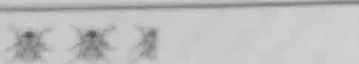
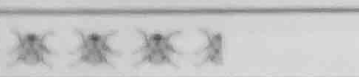
$\frac{1}{14}$ ☐ $\frac{1}{10}$ ☐ $\frac{2}{7}$ ☐ $\frac{1}{7}$ ☐ $\frac{3}{14}$ ☐

c) Martin then decides he wants to cover 20% of the remaining lawn with decking.
How many m^2 is this?

☐☐☐ m^2

GO TO THE NEXT QUESTION

2 Robbie counted the number of ladybirds in his garden over a week. He made a pictogram of his results.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

 = 4 ladybirds

a) How many more ladybirds did Robbie see in total on Wednesday and Thursday than on Saturday and Sunday?

b) What is the most common number of ladybirds that Robbie counted on any one day over the week?

c) What is the mean number of ladybirds that Robbie counted on any one day over the week?

3 This chart shows the distances in kilometres between six cities in France.

Calais					
574	Dijon				
111	504	Lille			
1258	684	1188	Nice		
294	312	224	952	Paris	
534	416	464	928	237	Tours

a) Isabelle travels exactly 224 kilometres. Between which two cities did she travel?

Calais and Paris	Paris and Dijon	Nice and Lille	Lille and Paris	Tours and Lille
☐	☐	☐	☐	☐

b) Peter travels from Lille to Tours.
Mary travels from Lille to Calais.
How much further does Peter travel than Mary?

☐☐☐☐ km

c) Juliette starts on a journey from Dijon to Lille.
She travels ¾ of the distance in the first day before stopping for the night.
She travels the remainder of the distance the next day.
How far does she travel on the second day?

☐☐☐☐ km

d) Marco needs to drive from Nice to Calais.
His car can drive 250 kilometres on a full tank of petrol.
Marco starts in Nice with a full tank of petrol.
What is the fewest number of times Marco can stop to fill up his car on his way to Calais?

☐☐

GO TO THE NEXT QUESTION ⇨

4 Two brothers, Robert and Dave, each have a savings account at the bank. They pay money into their accounts each month. The tables below show the total amounts in their accounts at the end of each month.

Month	Amount in account (£)
1	2
2	4
3	8
4	16
5	32
6	?

Robert

Month	Amount in account (£)
1	14
2	38
3	62
4	86
5	110
6	134

Dave

a) If Robert continues to save his money following the same pattern, how much will he have saved by the end of the 6th month?

£ ☐☐☐

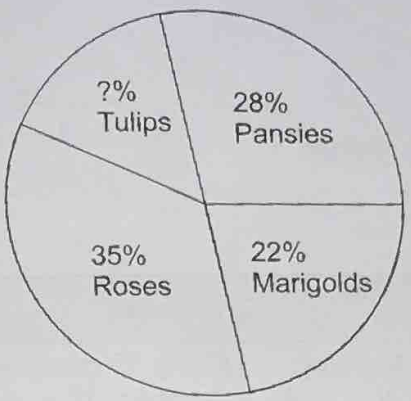
b) Which expression describes the amount that Dave has in his account at the end of each month, m?

$m + 14$ ☐ $20m - 6$ ☐ $14m + 10$ ☐ $24m - 10$ ☐ $24m \div 2$ ☐

c) Who will have saved the most money by the end of the 8th month?

Dave ☐ Robert ☐ Both equal ☐

5 This pie chart shows the percentage of flowering plants bought from a garden centre.



a) Altogether, 500 plants were sold. How many tulips were sold?

☐☐☐

b) Red and white roses were sold at a ratio of 4:1.
How many red roses were sold?

☐☐☐

The prices of the different flowering plants at the garden centre are in the table below.

Plant	Price (£)
Tulips	£7.50
Red Roses	£12
White Roses	£11.50
Marigolds	£9
Pansies	£4.50

c) What was the total value of all the pansies sold by the garden centre?

£☐☐☐.☐☐

GO TO THE NEXT QUESTION ⇨

6 Below are the timetables of events and tours for a day at Whitterby Zoo. The zoo is open from 9:30 until 17:30.

There are no pauses in between events.

Time	Event
10:00	Penguin Feeding
10:30	African Adventure
12:10	Big Cat Talk
12:45	Lunch with Lions
13:50	Gorilla Feeding
14:15	Sea Lion Display
15:00	Monkey Tricks
15:40	Zebra Feeding
16:00	Camel Rides
16:55	Talking with Parrots

Zoo Tours	
Morning: 9:30 - 11:45	Every 15 minutes. Duration: 10 minutes.
Lunch: 11:55 - 1:30	There will be no tours over the lunch break.
Afternoon: 1:30 - 5:15	Every 20 minutes. Duration: 15 minutes.

a) Which of these events is the shortest?

Penguin Feeding ☐ Big Cat Talk ☐ Gorilla Feeding ☐ Zebra Feeding ☐ Camel Rides ☐

b) How much longer is the African Adventure than the Gorilla Feeding?

☐☐☐ minutes

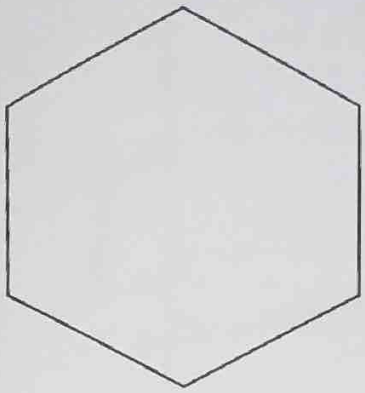
c) Jane arrives at the zoo at 12:10. She goes on the first tour she can after she arrives. What event is happening when she finishes the tour?

Big Cat Talk ☐ Lunch with Lions ☐ Gorilla Feeding ☐ Sea Lion Display ☐ Monkey Tricks ☐

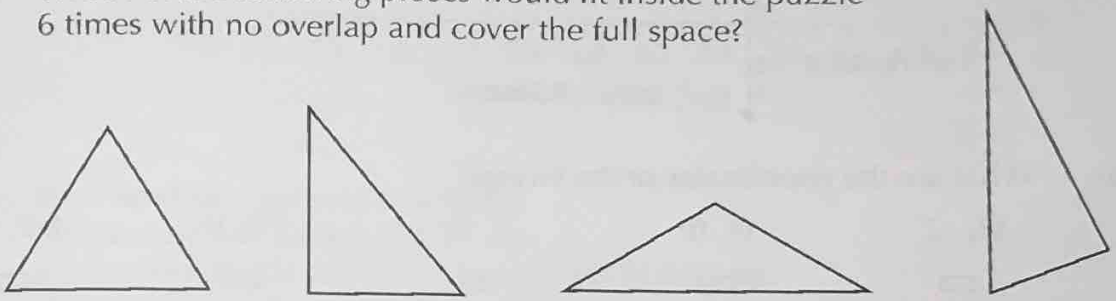
d) Susie goes to the Big Cat Talk. After it finishes she wants to go on a tour. How long will she have to wait before a tour starts?

☐☐☐ minutes

7 Jimmie has a puzzle which is the shape of a regular hexagon.
The puzzle has 6 identical pieces.



a) Which of the following pieces would fit inside the puzzle 6 times with no overlap and cover the full space?

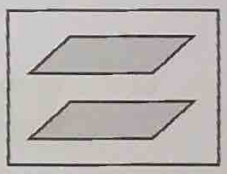


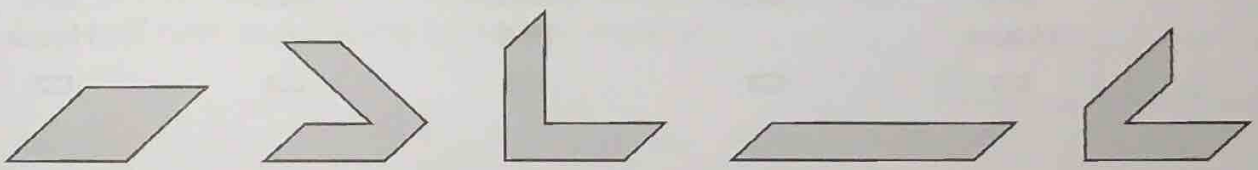
A ☐ B ☐ C ☐ D ☐

b) How many lines of symmetry does the puzzle have?

☐☐

c) Jimmie has a two identical puzzle pieces, shown on the right, each shaped like a parallelogram. He is allowed to rotate and translate the pieces to make a combined shape.
Which of these shapes will he not be able to make?

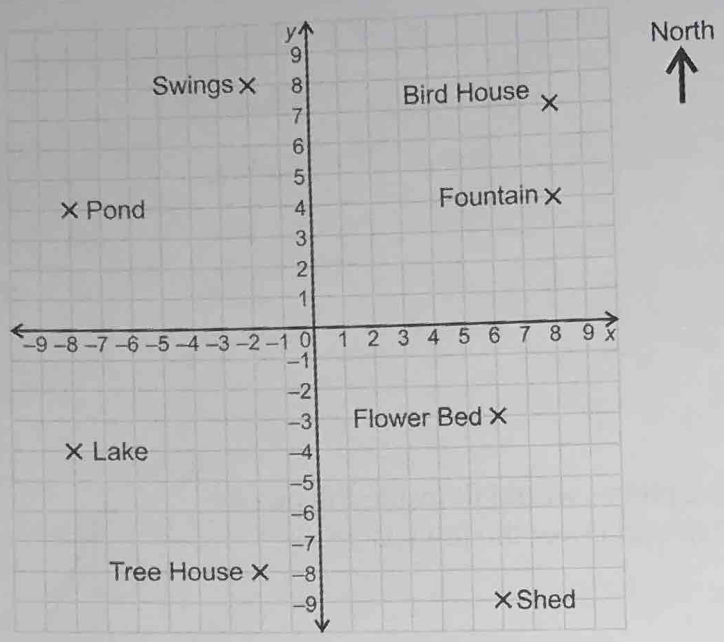




A ☐ B ☐ C ☐ D ☐ E ☐

GO TO THE NEXT QUESTION ⇨

8 The map below shows a plan of Vernon's garden.
Each square corresponds to 1 metre.



a) What are the coordinates of the swings?

(8, –2)	(1, 8)	(2, 8)	(–2, 8)	(–2, –8)
☐	☐	☐	☐	☐

b) Vernon stands at the flower bed. He walks 2 metres east and 10 metres north. What point in the garden has Vernon reached?

Tree House	Bird House	Fountain	Pond	Swings
☐	☐	☐	☐	☐

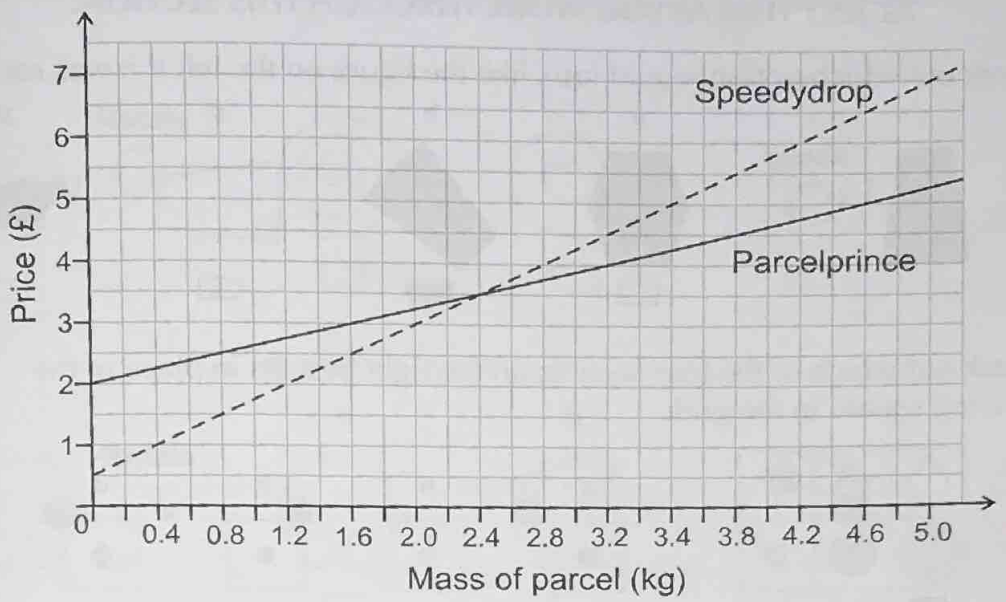
c) Vernon stands at the swings. He walks 6 metres south and turns to face south west. What is Vernon looking at?

Tree House	Lake	Flower Bed	Shed	Bird House
☐	☐	☐	☐	☐

d) What is at the point that is equivalent to the reflection of the pond in the x-axis?

Shed	Fountain	Flower Bed	Lake	Tree House
☐	☐	☐	☐	☐

9 The graph shows the cost of sending parcels with two different companies.



a) Jill is sending a present to a friend.
The present has a mass of 1.55 kg.
It is packed inside a box that has a mass of 0.05 kg.
What is the smallest amount that Jill can spend to send her parcel?

£ ☐☐.☐☐

b) Georgina packs 2 books into one parcel to be posted. The books have a mass of 2.2 kg and 1.6 kg and the packaging has a mass of 0.8 kg.
How much will Georgina pay if she uses the cheapest company?

£ ☐☐.☐☐

c) Harry needs to send two separate parcels. One has a mass of 0.8 kg and the other has a mass of 3.2 kg. He wants to use the same company to send both parcels. What is the smallest amount Harry will have to pay using the same company?

£ ☐☐.☐☐

STOP — YOU MAY CHECK YOUR ANSWERS IN THIS SECTION ONLY