11+

Practice Test

Set B: 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.

THERE ARE 14 MULTI-PART QUESTIONS IN THIS SECTION

1 Jamie goes fruit picking at Fruity Tooty's Pick Your Own.
He picks a selection of apples, pears and plums. He puts them in punnets of 12.

In total, Jamie fills 3½ punnets of apples, 4 punnets of pears
and 2¼ punnets of plums.

a)   How many apples did Jamie pick?

b)   How many more pears did Jamie pick than plums?

c)   What is the ratio of pears to apples?
Express your answer in its simplest form.

The prices of Fruity Tooty's Pick Your Own are in the table below.

Fruit	Price per ¼ punnet
Apple	30p
Pear	50p
Plum	60p
Discount of 20p per full punnet	

d)   How much did Jamie spend on plums?
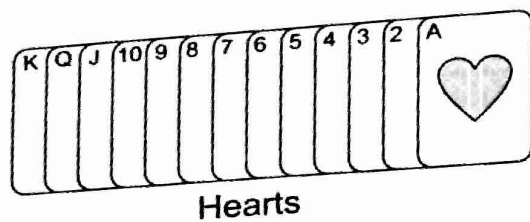
£ ⬚⬚ . ⬚⬚

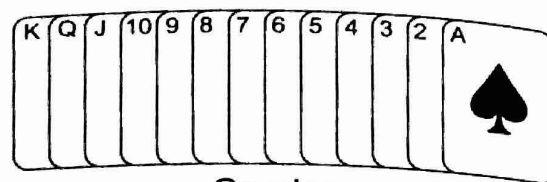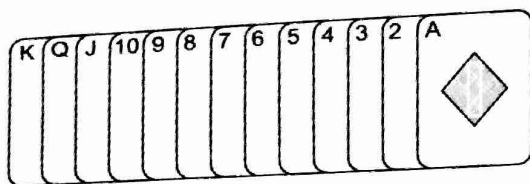## GO TO THE NEXT QUESTION ➡️

(2) Derren has a normal pack of 52 playing cards. It contains two red suits — he... and diamonds, and two black suits — spades and clubs.
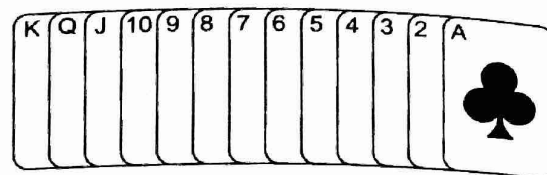The cards are numbered Ace, 2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen and King.

Hearts

Spades

Diamonds

Clubs

a) Derren removes the King of Diamonds from the pack of cards and puts it aside. What fraction of the remaining cards are either a King or Queen?
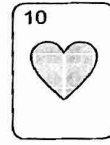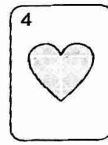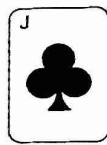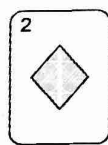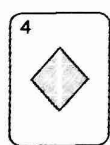
$\frac{3}{52}$ ☐ $\frac{7}{51}$ ☐ $\frac{7}{52}$ ☐ $\frac{3}{51}$ ☐ $\frac{4}{51}$ ☐

b) Derren removes the following 5 cards from the whole pack of cards and puts them aside.

What fraction of the remaining cards are red?
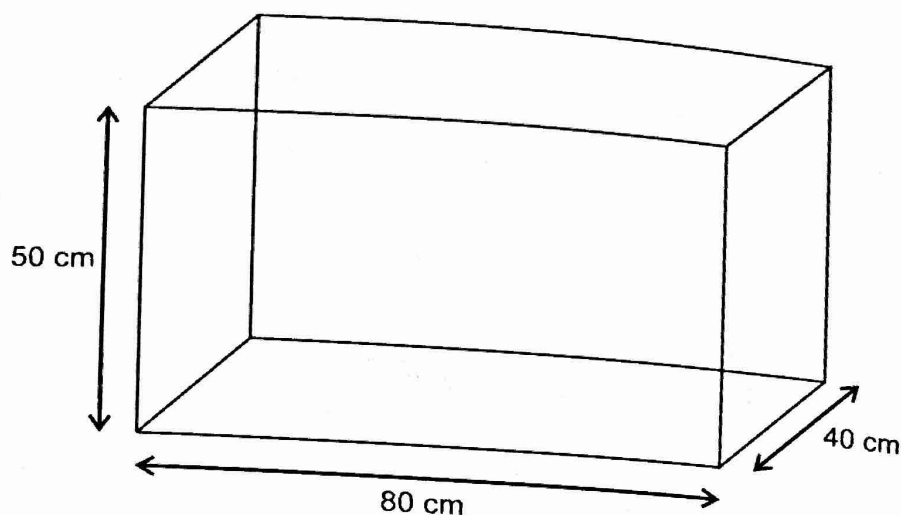
$\frac{47}{52}$ ☐ $\frac{12}{13}$ ☐ $\frac{5}{6}$ ☐ $\frac{22}{47}$ ☐ $\frac{1}{52}$ ☐

c) Derren takes the whole pack of cards and removes 12 cards.
He looks through the remaining cards and works out that $\frac{1}{20}$ of the remaining cards in the pack are Aces.
How many Aces have been removed in the 12 cards?

☐

3 The diagram below shows the dimensions of a fish tank.

50 cm

40 cm

80 cm

a) What is the total capacity of the tank in cm³?

cm³

b) Kim fills the tank ¾ full. How many cm³ of water are in the fish tank?

cm³

c) 1000 cm³ = 1 litre. How many litres of water are there in the fish tank?

12 litres   160 litres   4 litres   120 litres   16 litres

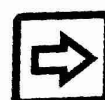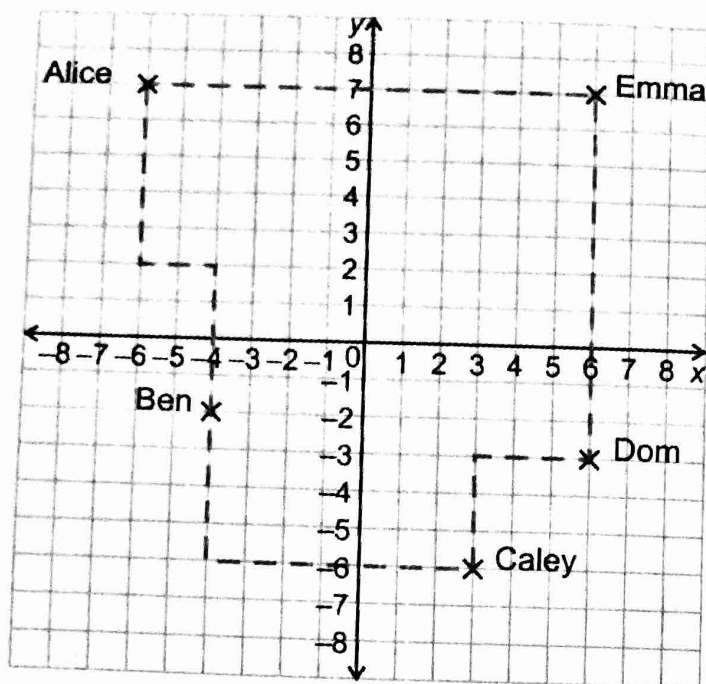☐   ☐   ☐   ☐   ☐

d) Kim allows 10 litres of water per fish in the tank.
How many fish will Kim be able to keep in the tank?

GO TO THE NEXT QUESTION ➡

④ The map below shows a path through a wood.
5 children are standing at different points on the path.
Each square on the map corresponds to 1 metre.

All 5 children run at different paces:

Name	Speed
Alice	6 metres per second
Ben	2 metres per second
Caley	0.5 metres per second
Dom	4 metres per second
Emma	3 metres per second

a) Ben starts running in a clockwise direction.
   He runs for 10 seconds. What are the coordinates of the point he arrives at?

   (3, 7) ☐   (–6, 6) ☐   (2, –6) ☐   (6, 0) ☐   (7, 3) ☐

b) Emma starts running in a clockwise direction. After 1 second
   Dom sets off in an anticlockwise direction. At what point will they meet?

   (6, 1) ☐   (1, 6) ☐   (–1, –6) ☐   (6, 4) ☐   (6, 2) ☐

c) Caley and Alice both start running in an anticlockwise direction.
   At what point will Alice catch up with Caley?

   (–4, 3) ☐   (5, –3) ☐   (–6, –1) ☐   (3, –4) ☐   (–6, 3) ☐

5 The picture below shows a rectangular lunch box.
It is divided into 4 segments: 3 triangles and 1 quadrilateral.
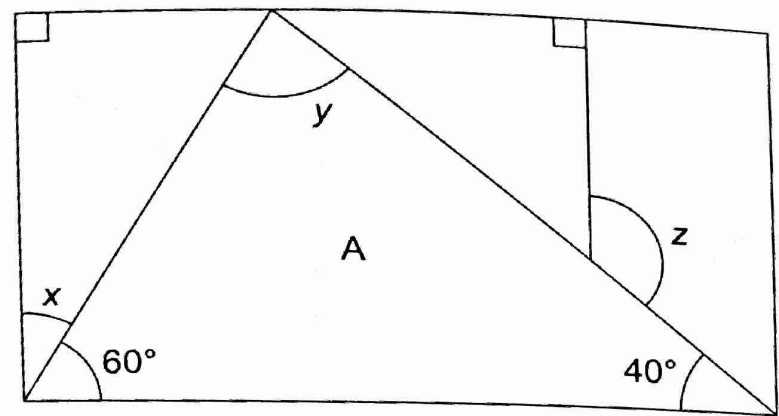
Not drawn accurately

y

A

z

x

60°

40°

a) What is the size of the angle marked *x*?

☐☐☐ °

b) What is the size of the angle marked *y*?

☐☐☐ °

c) What type of triangle is the shape marked **A**?
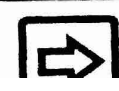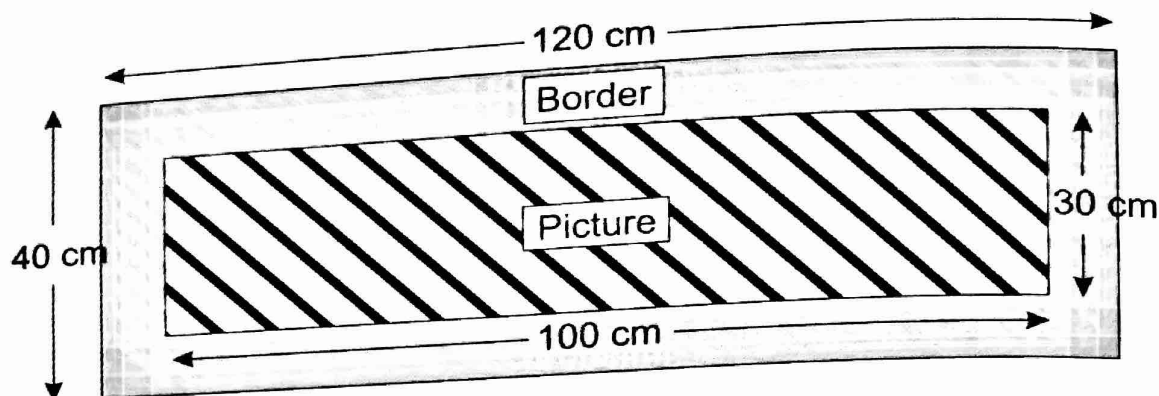
scalene ☐   isosceles ☐   right-angled ☐   equilateral ☐

d) What is the size of the angle marked *z*?

☐☐☐ °

GO TO THE NEXT QUESTION ⇨

6 Chiara has a photo frame. It is made up of an empty picture space and a border.

a) What is the area of the border?

☐☐☐☐ cm²

b) Chiara wants to fill her frame with individual photographs.
The photographs are 6 cm tall and 5 cm wide.
How many photographs will she be able to fit in the frame
with no overlap and keeping all photos the right way up?

☐☐☐

c) Chiara has a smaller frame which exactly fits 40 photographs into
the picture space. The photographs are 6 cm tall and 5 cm wide.
What is the area of the picture space?

☐☐☐☐ cm²

d) The total area of the smaller frame is 1725 cm².
What is the area of the border?

☐☐☐☐ cm²

(7) Billy asked his classmates what their favourite instrument was.
He recorded the results in a pictogram.

Instrument	
Piano	♪♪ ♪♪ ♪♪ ♪♪ ♪♪ ♪♪ ♪
Flute	♪♪ ♪
Cello	♪♪ ♪
Drums	♪♪ ♪♪ ♪♪
Guitar	♪♪ ♪♪ ♪♪ ♪

♪♪ = 6 children

a) How many people said that the piano was their favourite instrument?

☐☐

b) How many more people said that guitar was their favourite instrument than said the flute was?

☐☐

c) How many fewer people said that cello was their favourite instrument than piano?

☐☐

d) The piano was as popular as which instruments combined?

Drums, Flute and Cello	Drums and Flute	Cello and Flute	Cello, Flute and Guitar	Flute and Guitar
☐	☐	☐	☐	☐

GO TO THE NEXT QUESTION ➡

(8) Mary is measuring the temperature of a cake once a minute from when it comes out of the oven. She puts her results into the table below.

Time (mins)	Temperature (°C)
1	120
2	114
3	108
4	102
5	96

a) Which expression describes the temperature after m minutes?

$120m$ ☐ $120m - m$ ☐ $126 - 6m$ ☐ $126 - 2m$ ☐ $120 - m$ ☐

b) What will be the temperature of the cake after 11 minutes?

☐☐☐ °C

c) Mary needs to wait until the cake is 30 °C or below before she can ice it. How many minutes will Mary need to wait until she can ice the cake?

☐☐☐ minutes

9 A school pays £70 to print 100 copies of the school magazine.
The school sells 90 copies for £1.50 each.

a) What is the profit after paying for the printing of all 100 copies?

£ ☐☐☐

b) Class A spends £45 on school magazines.
If each child has bought one magazine, how many children are in Class A?

☐☐

c) The school increases the price of the school magazine by 20%.
How much will Class A spend in total if they
buy one copy each at the new price?

£ ☐☐

GO TO THE NEXT QUESTION ➡
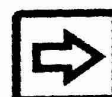
(10) Franz, Ollie and Oscar all own dogs. They are looking at hiring one of four different dog walking companies. All four companies charge depending on the number of dogs, d, and the length of the walk in miles, m.

Company	Price
Pooch Pals	$10d + m$
Barking Buddies	$2dm$
Canine Companions	$4(d + m)$
Happy Tails	$(5dm) \div 2$

a)   Franz owns two dogs. He wants them to be taken on a 5 mile walk. How much will it cost Franz if he goes with Canine Companions?

£ ☐☐ . ☐☐

b)   Ollie owns three dogs. He wants them to be taken on a 4 mile walk. How much will it cost Ollie if he goes with Happy Tails?

£ ☐☐ . ☐☐

c)   Oscar owns five dogs. He wants them to be taken on a 6 mile walk. Which company will be the cheapest for Oscar?

Pooch Pals	Barking Buddies	Canine Companions	Happy Tails
☐	☐	☐	☐

d)   Oscar pays Pooch Pals £58 to take his five dogs for a walk. How long was the walk that his dogs were taken on?

☐☐☐ miles

11 Below is a bus timetable for the trip from Didford to Plymstone.
The scheduled journey time for the bus is always the same.

Didford	10:15	10:45	11:15
Topham	10:31	11:01	11:31
Sidton	10:44	?	11:44
Dawcombe	11:00	11:30	12:00
Ide	11:20	11:50	12:20
Halldon	11:43	12:13	12:43
Plymstone	11:59	12:29	12:59

a) At what time will the 10:45 bus from Didford arrive at Sidton?

☐☐ : ☐☐

b) How many minutes does it take to get from Halldon to Plymstone on the bus?

☐☐☐ minutes

c) Lydia gets on the bus at 11:01 in Topham. She stays on for 72 minutes before getting off. At which stop did Lydia get off the bus?

| Sidton	Dawcombe	Ide	Halldon	Plymstone
☐	☐	☐	☐	☐

d) The bus that leaves Didford at 11:15 gets stuck in a traffic jam between Sidton and Ide. There is a 15 minute delay between Sidton and Dawcombe, and a further 8 minute delay between Dawcombe and Ide.
At what time will the 11:15 bus arrive in Ide?

☐☐ : ☐☐

(12) Tony goes on a run. He runs along a straight track away from his house and back. He plots a graph of how far he ran against the time.
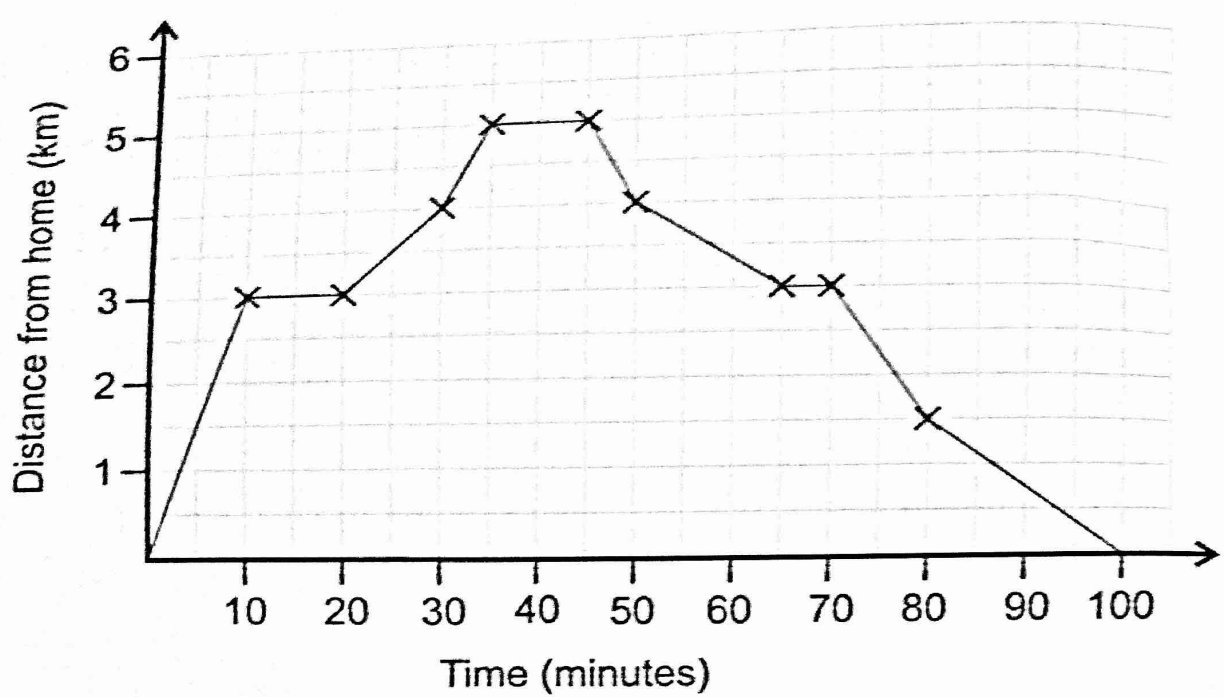
a) How long was Tony's run?

[ ][ ] km

b) For how many minutes did Tony rest on his run?

[ ][ ] minutes

c) Between what times did Tony run the fastest?

0 - 10 minutes	20 - 30 minutes	45 - 50 minutes	70 - 80 minutes	80 - 100 minutes
☐	☐	☐	☐	☐

13) The menu for the Merry Cow Milkshake Parlour is shown below.
The price of a milkshake depends on the size and the
number and type of toppings.

Size	
Small	£2.00
Medium	£3.00
Large	£3.50
Huge	£3.80

Standard Toppings (+ 20p each)
Strawberries, Cherries, Chocolate chips, Granola, Banana, Marshmallows

Deluxe Toppings (+ 50p each)
Brownies, Passion fruit, Chocolate flake, Sherbet, Fudge, Blueberries

a) Jake buys a large milkshake with strawberries, fudge and blueberries.
How much does this cost him?

£ ⬜⬜ . ⬜⬜

b) Katie buys a medium milkshake with a number of standard and deluxe toppings. She pays £4.10.
How many standard toppings did she chose?

⬜

On Mondays, there is a special discount of 20% off all sizes of milkshakes, and 50% off all toppings.

c) Sarah buys a small milkshake with cherries, brownies and sherbet toppings.
How much will this cost her on a Monday?

£ ⬜⬜ . ⬜⬜

GO TO THE NEXT QUESTION ➡

(14) Farmer Charles owns 450 acres of land.
He is dividing it up between different crops and animals.
He makes the table below to show how much of
the total land each animal or crop will have.

Animal/Crop	Land assigned
Barley	20%
Wheat	$\frac{7}{50}$
Cows	45%
Maize	45 acres
Sheep	11%

a)   How many acres has Farmer Charles assigned to sheep?

⬜⬜ · ⬜ acres

b)   How many acres has Farmer Charles assigned to wheat?

⬜⬜ acres

c)   What is the proportion of land that Farmer Charles has
assigned to maize as a percentage?

⬜⬜ %

d)   Which animal or crop has the fewest acres?

Barley   Wheat   Cows   Maize   Sheep

⬜   ⬜   ⬜   ⬜   ⬜

❌

STOP — YOU MAY CHECK YOUR ANSWERS IN THIS SECTION ONLY