Test 8

You have 50 minutes to complete this test.

You have 50 questions to complete within the given time.

Circle the letter above or alongside the correct answer.

(1) What is this number in words?

7007

A	seven thousand and seventy
B	seven thousand, seven hundred
C	seven thousand and seven
D	seventy thousand and seven
E	seven hundred and seventy

(2) Rearrange these digits to make the largest number possible.

573 927

A	**B**	**C**	**D**	**E**
977 532	975 732	235 779	977 352	997 353

(3) How many ten-pence coins have the same value as 80 two-pence coins?

A	**B**	**C**	**D**	**E**
160	90	20	16	32

(4) A triangle has a base of 10 cm and a height of 7 cm.
A shape is formed by placing identical versions of the triangle side by side.
The area of the new shape is 210 cm^2.

How many triangles are used to form the new shape?

A	**B**	**C**	**D**	**E**
6	7	10	15	30

5 Look at the following train timetable.

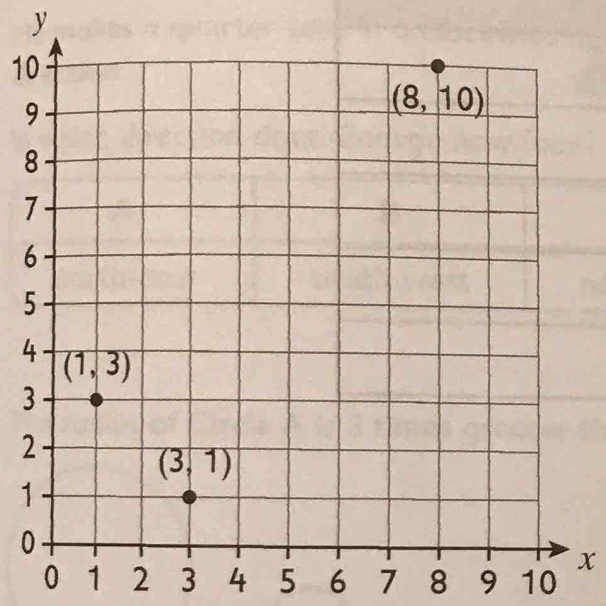
Birmingham	0623	0653	0723	0753
Coleshill	0635	0705	0735	0805
Nuneaton	0700	0722	0751	0822
Hinkley	–	0729	0758	0829
Leicester	0717	0748	0817	0848

Jamie takes the 07:23 train from Birmingham to Hinckley.

How long does Jamie's journey take?

A	B	C	D	E
28 minutes	35 minutes	36 minutes	42 minutes	45 minutes

6 The coordinates of three of the corners of a rectangle have been plotted on the grid below.



What are the coordinates of the fourth corner of the rectangle?

A	B	C	D	E
(8, 10)	(6, 4)	(7, 9)	(3, 1)	(10, 8)

Questions continue on the next page

(7) How many more factors does the number 36 have than the number 15?

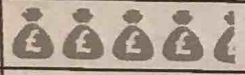
A	B	C	D	E
9	8	5	10	4

(8) Jenny thinks of a decimal number and multiplies it by 4
The answer is a whole number.

Which of the following could be the number that Jenny thought of?

A	B	C	D	E
3·41	3·35	3·85	3·25	3·7

(9) This pictogram shows the hourly wage for different jobs.

Average hourly wage	
Orthodontist	
Lawyer	
Podiatrist	
Actuary	
Cashier	

Each  = £10

Each  = £5

Roy is a lawyer.
He works from 9:00 a.m. to 5:30 p.m. for five days a week.

How much money does Roy earn each week?

A	B	C	D	E
£1657	£275	£2337·50	£55	£2800

(10) The average water temperature of a lake is 25% higher than the average for the previous year.

The average water temperature of the lake is 30°C.

What was the average water temperature of the lake for the previous year?

A	B	C	D	E
30°C	24°C	36°C	33°C	26°C

(11) Which of these fractions is the smallest?

A	B	C	D	E
$\frac{1}{8}$	$\frac{2}{10}$	$\frac{1}{9}$	$\frac{5}{20}$	$\frac{4}{24}$

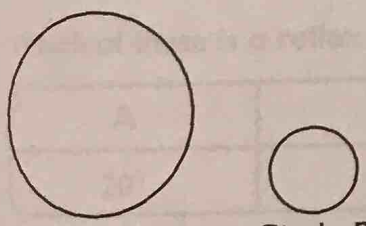
(12) George faces north.

He makes a quarter turn in a clockwise direction and then turns 135° in an anticlockwise direction.

In which direction does George now face?

A	B	C	D	E
north-east	south-west	north-west	west	south-east

(13) The radius of Circle A is 3 times greater than the radius of Circle B.



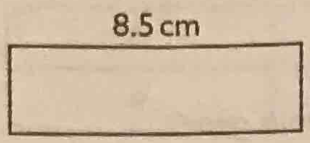
Circle A Circle B

How many times greater is the radius of Circle A than the diameter of Circle B?

A	B	C	D	E
1 times	$1\frac{1}{2}$ times	2 times	$2\frac{1}{2}$ times	3 times

Questions continue on the next page

(14) What is the area of this rectangle?



A	B	C	D	E
23·8 cm²	24·6 cm²	25·18 cm²	16·9 cm²	19·4 cm²

(15) A farmer feeds each pig on her farm D apples and S turnips per day.
She has 3 dozen pigs on her farm.

Which of the following expressions shows how many apples and turnips the farmer feeds to her pigs in total each week?

A	$36 + 7 + S + D$
B	$36 \times (S + D)$
C	$36 \times 7 \times S \times D$
D	$252D + 252S$
E	$3 \times 12 \times 7 + S \times D$

(16) Which of these calculations has the lowest value?

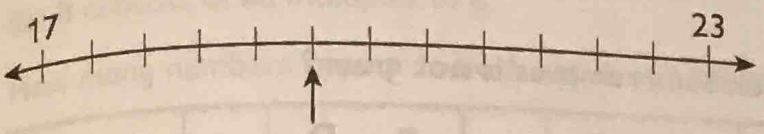
A	$38 + 18 + 14 \times 2$
B	$13 \times 7 + 2 + 19$
C	$43 - 8 + 32 + 80$
D	$12 \times 10 - 5 + 90$
E	$32 - 8 - 6 \times 5$

(17) Cube A has a side length of 2 cm.
Cube B has a side length of 4 cm.

What is the percentage increase in volume of Cube B compared to Cube A?

A	B	C	D	E
8%	64%	200%	800%	6400%

(18) What value is the arrow pointing to on this number line?



A	B	C	D	E
19·5	19	21	21·5	20·25

(19) 400 people took part in a survey.
30% of those who took part were female and the rest were male.
60% of the males who took part were 25 years old or younger.

How many males older than 25 took part in the survey?

A	B	C	D	E
120	168	280	300	112

(20) The largest of 5 consecutive even numbers is 18

What is the sum of the 5 numbers?

A	B	C	D	E
140	28	7	70	56

(21) Which of these is a reflex angle?

A	B	C	D	E
20°	89°	135°	145°	220°

(22) The cost of a coach ticket is £4·40 for an adult and £2·30 for a child.
Mr Jones buys tickets for himself, his wife and his 4 children.

How much does he spend in total?

A	B	C	D	E
£9·20	£6·70	£18·00	£13·60	£8·80

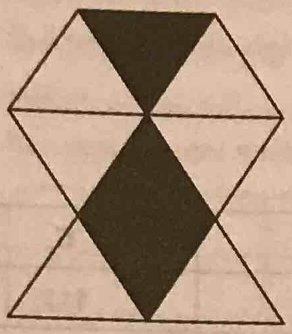
Questions continue on the next page

(23) A bag contains 4 red blocks, 8 green blocks and 7 white blocks.
Sami removes 1 block at random.

What is the probability that the block Sami removes is **not** green?

A	B	C	D	E
$\frac{1}{20}$	$\frac{8}{19}$	$\frac{11}{19}$	$\frac{14}{19}$	$\frac{5}{11}$

(24) What fraction of this shape is shaded?



A	B	C	D	E
$\frac{3}{10}$	$\frac{1}{9}$	$\frac{6}{9}$	$\frac{1}{3}$	$\frac{4}{5}$

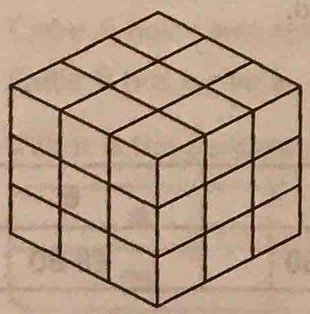
(25) The ratio of lions, tigers and leopards in a jungle is 4:3:8

If there are 78 tigers in the jungle, how many leopards are there?

A	B	C	D	E
26	156	208	39	234

(26) Cube A is formed from identical smaller cubes, each with a side length of 2 cm.

What is the volume of Cube A?



Cube A

A	B	C	D	E
$8\,cm^3$	$54\,cm^3$	$64\,cm^3$	$27\,cm^3$	$216\,cm^3$

(27) Set A consists of all numbers greater than 7 but less than 48
Set B consists of all multiples of 6

How many numbers appear in both Set A and Set B?

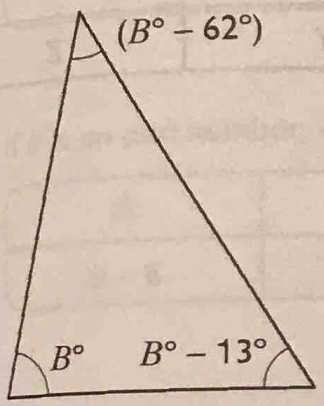
A	B	C	D	E
3	4	5	6	7

(28) Tamara wants to calculate the distance from London to Paris.

Which of the following would be the most appropriate unit of measurement for her to use?

A	B	C	D	E
mm	cm	m	km	kg

(29) What is the value of $B°$?



A	B	C	D	E
90°	82°	85°	78°	57°

(30) It takes 7 people 21 hours to build a fence.

How long would it take 21 people to build the same fence?

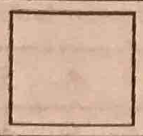
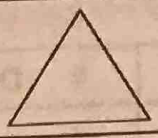
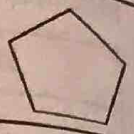
A	B	C	D	E
14 hours	21 hours	147 hours	12 hours	7 hours

(31) 6·7 km ÷ 8 =

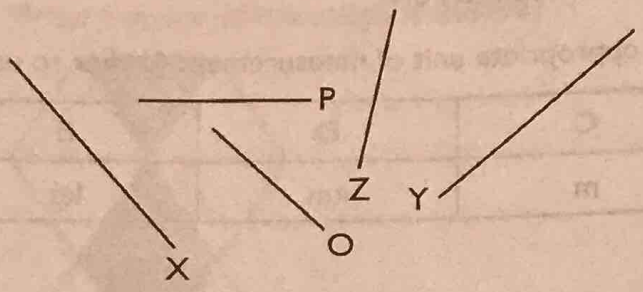
A	B	C	D	E
900·5 m	845 m	837·5 m	820 m	810 m

Questions continue on the next page

(32) Which of these shapes has an order of rotational symmetry of 2?

A	B	C	D	E
				

(33) Which line is perpendicular to line X?



A	B	C	D	E
O	P	X	Y	Z

(34) There are 9 warehouses in a factory.
Each warehouse holds 54 crates.
Each crate holds 19 robots.

How many robots are there in the factory?
Round your answer to the nearest 10

A	B	C	D	E
9240	1030	2500	9230	1020

(35) A jar contains 12 red sweets, 13 blue sweets, 11 green sweets and 10 yellow sweets.

Which of these statements is **false**?

A	There are more red sweets than yellow sweets in the jar.
B	There are more blue sweets than red sweets in the jar.
C	There are more green sweets than yellow sweets in the jar.
D	There are more yellow sweets than blue sweets in the jar.
E	There are more blue sweets than red sweets in the jar.

(36) Which of these numbers is closest to 0·3?

A	B	C	D	E
0·305	0·31	0·298	0·2	0·2002

(37) The mean number of cakes eaten by the people at an event was $2\frac{3}{4}$.

If there were 20 people at the event, how many cakes were eaten in total?

A	B	C	D	E
15 cakes	20 cakes	40 cakes	55 cakes	60 cakes

(38) What percentage of 1 year is 54 months?

A	B	C	D	E
3%	22%	4·50%	450%	80%

(39) If b is an odd number, which of the following must be an even number?

A	B	C	D	E
$b - 8$	$2b$	$3b$	$2b - 5$	$b + 2$

(40) A car travels at a speed of 100 kph for 4 hours.
It then does not move for 1 hour.
Finally, it travels 3 hours at a speed of 70 kph.

What is the car's average speed over this whole period?

A	B	C	D	E
100 kph	70 kph	76.25 kph	21.25 kph	85 kph

(41) Andrew mixes 2 litres of squash with 4 times as much water.

How many 200 ml cups can he fill with this mixture?

A	B	C	D	E
30 cups	50 cups	40 cups	20 cups	10 cups

Questions continue on the next page

(42) Parv drew a shape in which the internal angles add up to 360°.

Which of these shapes could Parv have drawn?

A	B	C	D	E
triangle	rhombus	pentagon	hexagon	octagon

(43) The mean of 8, 9, A and B is 10

What is the sum of A and B?

A	B	C	D	E
40	3	23	17	10

(44) Which number comes next in this sequence?

18 21 25 30 36 ?

A	B	C	D	E
40	45	54	60	43

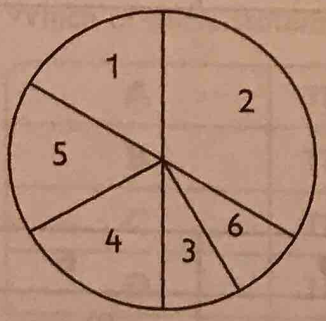
(45) The coordinates of two corners of a square on a centimetre grid are (–5 , 7) and (3 , –1).

What is the area of the square?

A	B	C	D	E
8 cm^2	64 cm^2	60 cm^2	100 cm^2	36 cm^2

(46) A dice was rolled 100 times.

The frequency of each score was recorded in this pie chart.



What was the most common score?

A	B	C	D	E
1	2	6	5	4

(47) The ratio of the number of oranges to the number of bananas in a box is 7:6

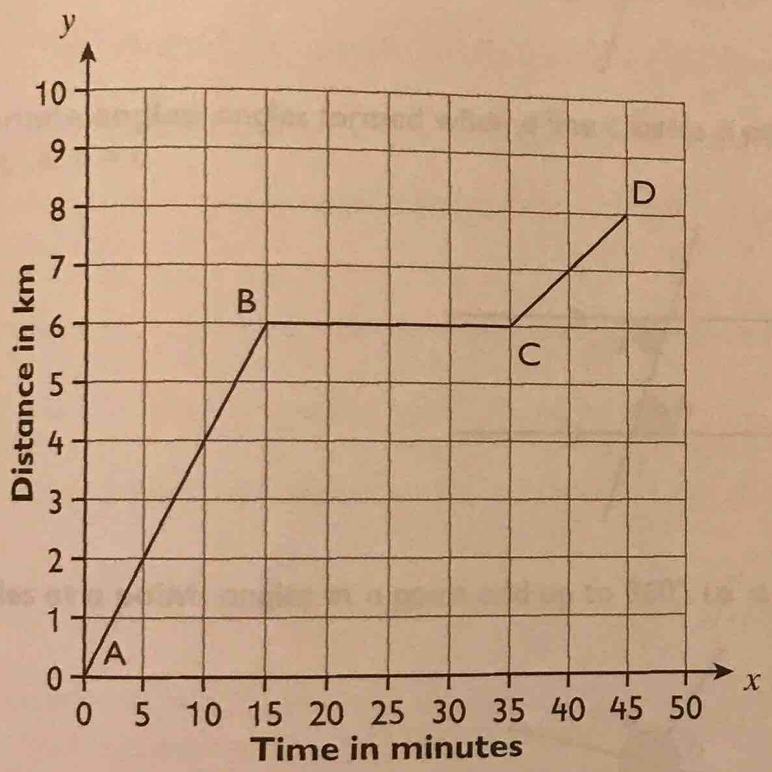
Which of the following could **not** be the total number of oranges and bananas in the box?

A	B	C	D	E
26	78	64	117	104

(48) How many different combinations of coins can have a total of 10 pence?

A	B	C	D	E
3	6	8	10	11

(49) This graph shows the distance covered by a cyclist on a trip.

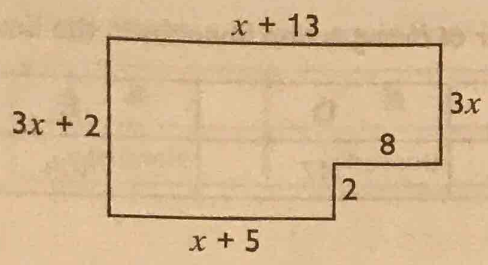


For how long was the cyclist stationary during the trip?

A	B	C	D	E
0 minutes	10 minutes	15 minutes	20 minutes	25 minutes

Questions continue on the next page

(50) What is the perimeter of this shape?



A	$4x + 15$
B	$3x + 15$
C	$8x + 30$
D	$3x + 2 + x + 13 + 3x + 8 + 2 + x + 6$
E	$2x + 18$

Score: ..... / 50