

# ISEB Common Pre-Test Mathematics Paper 1

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# ISEB Pre-Test Mathematics Paper 1

**Instructions:**

- You have 50 minutes to answer 50 questions.
- Try to answer each question, but do not spend too long on those you find difficult.
- Put a line through the correct answer by choosing one of the options A-E.
- Each question is worth one mark.

**Example:**

The **Correct** way to mark your answers on the answer sheet:

**Correct**

~~A~~

[B]

[C]

[D]

The **Incorrect** way to mark your answers on the answer sheet:

**Incorrect**

~~A~~

[A]

~~C~~

(D)

**Use a pencil** to mark your answers. **Rub out any errors**, do not cross them out.

**Please take care** when marking your answers on your answer sheets.

Make sure you mark your answer **on the line that matches the question number and mark only one answer per line.**

**Information about the test papers:**

- The page number is in the top right corner of each page.
- The content of this paper is similar to that of the mathematics ISEB Common Pre-Test taken in year 6/7 for independent school entry.
- Please remember that the real ISEB pre-test is taken online and students must click on their chosen answer for each question, rather than using an answering booklet. The answering booklet provided here is optional. Students may choose to circle their answers instead.
- When taking the ISEB pre-test, a countdown timer will be visible on screen. You may wish to set one up for your child before they start, using a smartphone or other device.
- A familiarisation test from ISEB showing how the test will appear for students on screen can be found here: <https://testwise.testingforschools.com/tests/player-demo-iseb/#/>

1) Which number is a factor of 10?

A	B	C	D	E
5	8	9	7	4

2) What is the lowest common multiple of 2 and 10

A	B	C	D	E
2	4	5	10	20

3) Aaron's dog eats 2.1 kilograms of dog food each day. How much dog food will Aaron's dog eat in 9 days?

A	B	C	D	E
17.6 kg	18.9 kg	21.0 kg	22.1 kg	23.5 kg

4) Katie went to the hardware store and bought 3 yellow ropes. The total length of the ropes was 231.9 metres. How long was each rope?

A	B	C	D	E
54.8	66.2	77.3	84.9	92.4

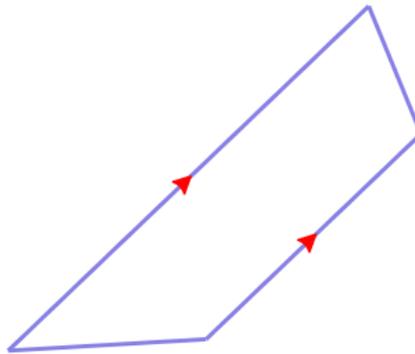
5) What is 33.415 rounded to the nearest tenth?

A	B	C	D	E
33.0	33.41	33.42	33.415	33.4

6) A carpenter bought a piece of wood that was 24.3 centimetres long. Then she sawed 0.33 centimetres off the end. How long is the piece of wood now?

A	B	C	D	E
19.45 cm	20.89 cm	23.97 cm	24.97 cm	25.21 cm

7) What name best describes this shape?



A	B	C	D	E
Kite	Rectangle	Square	Trapezium	Rhombus

8) What is 120% of £70?

A	B	C	D	E
£14	£28	£64	£84	£98

9) The regular price for a skateboard is £41. Today only, it is on sale for £25 off. If my friend Duncan buys this skateboard today, how much will he pay?

A	B	C	D	E
£16	£8	£21	£18	£12

10) Ivan had both chocolate cake and coconut cake at his birthday party. There were 35 people at the party, and 20% of them picked chocolate cake. How many people picked chocolate cake?

A	B	C	D	E
5	7	9	10	12

11) Josiah was collecting coins. He got 8 coins from his piggy bank and 4 coins from his brother. His father gave Josiah 12 coins. Josiah gave 14 of the coins to his friend Maggie. How many coins did Josiah have left?

A	B	C	D	E
38	24	15	10	8

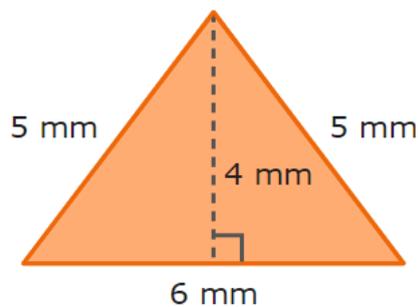
12) What is  $\frac{1}{8} \times \frac{1}{5}$  ?

A	B	C	D	E
$\frac{2}{13}$	$\frac{1}{3}$	$\frac{1}{40}$	$\frac{1}{13}$	$\frac{2}{40}$

13) Danny went to a pizza place with 2 friends. They ordered a large mushroom pizza for £12.40 and a garden salad for £3.65. They also got 2 sodas for £0.55 each. The tax came to £0.90. How much change should they have received from £20.00?

A	B	C	D	E
£18.05	£1.95	£16.38	£12.93	£8.38

14) What is the area of this triangle?



A	B	C	D	E
$30 \text{ mm}^2$	$15 \text{ mm}^2$	$24 \text{ mm}^2$	$10 \text{ mm}^2$	$12 \text{ mm}^2$

15) What is the missing number in this sequence: 77, ..., 61, 53, 45

A	B	C	D	E
69	75	71	66	64

16) A 7-pack of felt-tip pens costs £1.96. What is the price per pen?

A	B	C	D	E
15p	19p	24p	28p	30p

17) John picks a card at random from the ones below.



What is the probability he picks an even number?

A	B	C	D	E
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{1}{3}$

18) Solve for b:  $3 + 3b = 9$

A	B	C	D	E
1	2	3	4	5

19) What is the missing number in this sequence: 2, 4, 8, ..., 32

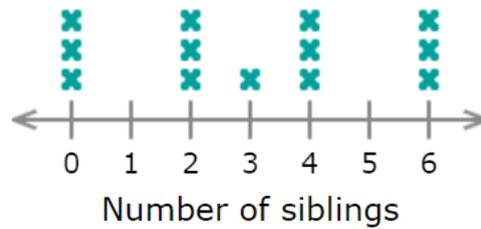
A	B	C	D	E
12	16	20	26	30

20) Anna has 18 more elastic bands than Kamal. Kamal has  $r$  elastic bands. Choose the expression that shows how many elastic bands Anna has.

A	B	C	D	E
$r$	$18 - r$	18	$r + 18$	$r - 18$

21) The students in Mr. Hall's class recorded the number of siblings that each has.

**Siblings**



What is the mean of the numbers?

A	B	C	D	E
39	2	13	7	3

22) The adventure club went on a hike to see a waterfall. To get to the hike, the club members took 5 cars and 3 vans. There were 3 people in each car and 8 people in each van. How many people went on the hike?

A	B	C	D	E
35 people	39 people	42 people	44 people	48 people

23) Emmy prepared 8 kilograms of dough after working 4 hours. How many hours did Emmy work if she prepared 12 kilograms of dough? Assume the relationship is directly proportional.

A	B	C	D	E
4 hours	4.5 hours	6 hours	7.5 hours	8 hours

24) What is the mode of the following set of numbers: 3, 1, 3, 4, 4, 1, 3

A	B	C	D	E
1	2	3	4	5

**25) Recently, the value of Camille's university savings fund decreased by £21. If her fund was worth £704 before, how much is it worth now?**

A	B	C	D	E
£594	£628	£658	£683	£692

**26) There are 16 empty parking spots and 34 full parking spots in the parking garage. What is the ratio of the number of empty parking spots to the number of full parking spots?**

A	B	C	D	E
8:17	17:8	8:25	17:25	25:8

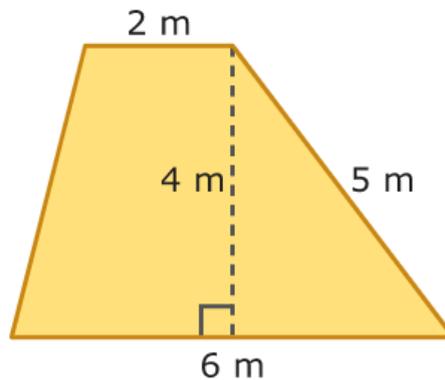
**27) Fred earns £10 per hour. Last week, he worked 10 hours on Monday, 7 hours on Tuesday, and 7 hours on Wednesday. He had Thursday off, and then he worked 6 hours on Friday. How much money did Fred earn in all last week?**

A	B	C	D	E
£280	£300	£330	£350	£380

**28) In Dalton's desk drawer there are 14 yellow highlighters. There are 4 more pink highlighters than yellow highlighters, and there are 7 more blue highlighters than pink highlighters. How many highlighters are in Dalton's desk drawer in all?**

A	B	C	D	E
14	28	34	48	57

29) What is the area of the trapezium shown?



A	B	C	D	E
14 m <sup>2</sup>	16 m <sup>2</sup>	24 m <sup>2</sup>	36 m <sup>2</sup>	40 m <sup>2</sup>

30) Mackenzie made sugar biscuits to share with her friends. She spent 30 minutes making the dough and 1 hour baking the biscuits. Then, she spent 30 minutes decorating the biscuits with icing and sprinkles. It was 5:30pm when Mackenzie finally finished all of the biscuits. What time did Mackenzie start making the biscuits?

A	B	C	D	E
6:30 pm	3:30 pm	4:00 pm	6:00 pm	4:30 pm

31) In 4,782, in which place is the 7?

A	B	C	D	E
units	tens	hundreds	thousands	tenths

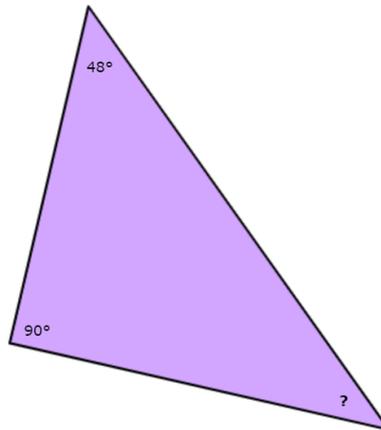
32) There are 4 bags of beans. Each bag contains 4,251 beans. How many beans are there in all?

A	B	C	D	E
13,028	15,238	16,837	16,932	17,004

**33) How many months are there in 42 years?**

A	B	C	D	E
504	532	614	664	712

**34) What is the size of the angle?**



A	B	C	D	E
$21^\circ$	$34^\circ$	$42^\circ$	$88^\circ$	$138^\circ$

**35) What is  $\frac{13}{20}$  as a percentage?**

A	B	C	D	E
13%	26%	45%	65%	72%

**36) Hugo made a 3-dimensional figure that had 2 circular faces. Which figure could Hugo have made?**

A	B	C	D	E
Triangular prism	Cylinder	Rectangular pyramid	Sphere	Cuboid

37) For breakfast, Aisha bought a muffin for £0.90 and a cup of coffee for £0.85. For lunch, Aisha had soup, a salad, and lemonade. The soup cost £1.65, the salad cost £2.90, and the lemonade cost £0.70. How much more money did Aisha spend on lunch than on breakfast?

A	B	C	D	E
£1.25	£1.50	£2.35	£2.95	£3.50

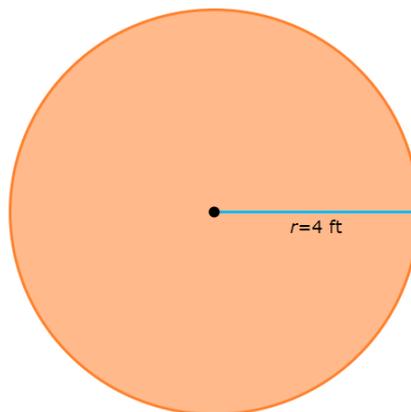
38) Nicole bought 3 packs of red bouncy balls, 4 packs of yellow bouncy balls, and 7 packs of green bouncy balls. There were 19 bouncy balls in each package. How many bouncy balls did Nicole buy in all?

A	B	C	D	E
312	305	287	266	243

39) Ronald has 14 red beads, and he has 10 fewer yellow beads than red beads. Ronald also has 6 more green beads than red beads. How many beads does Ronald have in all?

A	B	C	D	E
35	38	42	44	50

40) The radius of a circle is 4 feet. What is the circle's area? Use 3.14 for  $\pi$ .



A	B	C	D	E
38.64 ft <sup>2</sup>	42.40 ft <sup>2</sup>	46.82 ft <sup>2</sup>	50.24 ft <sup>2</sup>	64.46 ft <sup>2</sup>

41) There are 3 consecutive integers that add up to 27. Which is the smallest of the integers?

A	B	C	D	E
7	8	9	10	11

42) Jada works at a store where she earns a base salary of £75 per week plus a commission of 20% of sales. If Jada sold £95 worth of merchandise last week, what was her total pay?

A	B	C	D	E
£82	£94	£112	£137	£162

43) Students at Centerville Secondary School wrote and submitted poems for a district-wide writing contest.

Writing poems	
Poems written	Frequency
1	11
2	9
3	4
4	6

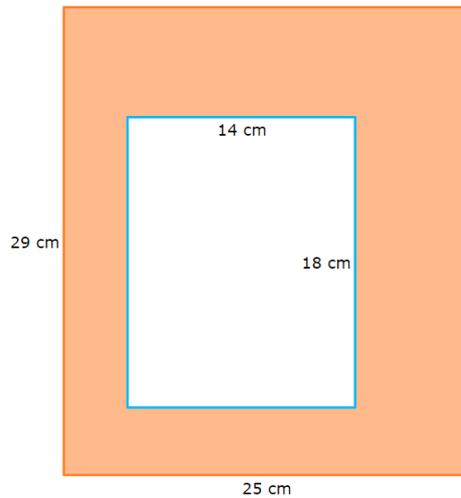
How many students wrote 3 or more poems?

A	B	C	D	E
10	11	13	17	21

44) Felipe had 28 stickers. He bought 15 more stickers from a store in the mall and got 28 stickers for his birthday. Then Felipe gave 9 of the stickers to his sister and used 60 to decorate a greeting card. How many stickers does Felipe have left?

A	B	C	D	E
7	5	2	13	8

45) What is the area of the shaded region?



A	B	C	D	E
387 cm <sup>2</sup>	413 cm <sup>2</sup>	447 cm <sup>2</sup>	473 cm <sup>2</sup>	501 cm <sup>2</sup>

46) How many grams are there in 42.3 kilograms?

A	B	C	D	E
42,300 g	4,230 g	423 g	42.3 g	4.23 g

47) Herman saved up £25. Then he got £7 for his allowance. Herman spent £4 on a pair of gloves, £4 on a winter hat, and £12 on a scarf. How much money does Herman have left?

A	B	C	D	E
£7	£9	£10	£12	£15

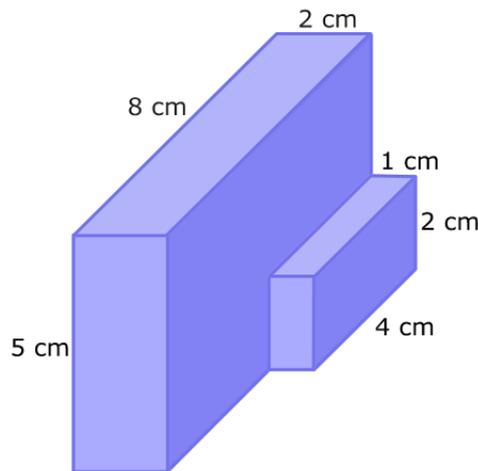
48) There are 4 bicycles and 14 cars in the garage at Victoria's flat building. How many wheels are there in the garage?

A	B	C	D	E
32	54	40	28	64

49) Bridget made 4 stacks of wooden blocks. The first stack was 5 blocks tall. The second stack was 3 blocks taller than the first. The third stack was 3 blocks shorter than the second stack, and the last stack was 4 blocks taller than the third stack. How many blocks did Bridget use in all?

A	B	C	D	E
17 blocks	21 blocks	27 blocks	29 blocks	33 blocks

50) What is the volume of this figure?



A	B	C	D	E
59 cm <sup>3</sup>	66 cm <sup>3</sup>	71 cm <sup>3</sup>	75 cm <sup>3</sup>	88 cm <sup>3</sup>

**End of paper.**