

# ISEB Assessments Year 3 Maths Test 2

Author: David E Hanson



This test contains a selected set of 10 questions in a particular topic order.

- 100 marks are available in total.
- You should take no more than 1 hour to complete the test.
- Write your answers in the spaces provided.
- Always write down your working, except when you are told not to.
- Calculators are not allowed.

SAMPLE

## NOTE TO TEACHERS

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**Year 3 Maths Test 2**

1. (a) Write these numbers in words.

(i) 347

Answer: .....

..... (1)

(ii) 1205

Answer: .....

..... (1)

(b) Write these numbers in figures.

(i) one hundred and twenty

Answer: ..... (1)

(ii) thirteen thousand and twenty three

Answer: ..... (2)

(c) What is the value of the digit 5 in

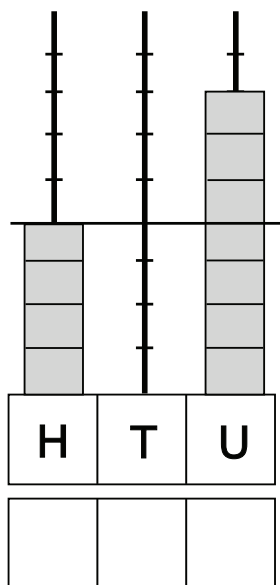
(i) 257

Answer: ..... (1)

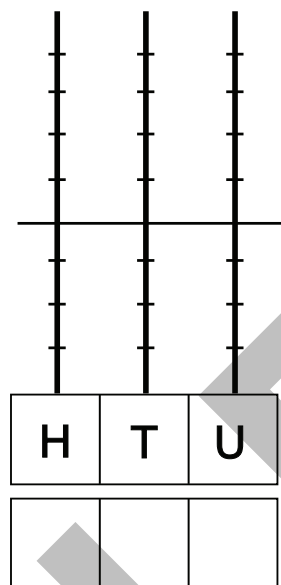
(ii) 1540?

Answer: ..... (1)

(d) The diagram shows two abacuses, A and B.



A



B

- (i) What number is represented on abacus A? Write it in the boxes provided. (1)
- (ii) On abacus B show the number that you would get if you added 5 to the number shown on abacus A. (2)

2. (a) Complete these number sentences.

- (i)  $23 + 18 = \dots\dots\dots$  (1)
- (ii)  $18 + \dots\dots\dots = 41$  (1)
- (iii)  $41 - 23 = \dots\dots\dots$  (1)
- (iv)  $41 - \dots\dots\dots = 23$  (1)

Year 3 Maths Test 2

(b) Use the calculation

$$137 + 29 - 48 = 118$$

to help you to complete the number sentences below. You should not do any working.

(i)  $137 - 48 + 29 = \dots\dots\dots$  (1)

(ii)  $29 + 137 - \dots\dots\dots = 118$  (1)

(iii)  $137 + 29 = 118 + \dots\dots\dots$  (1)

(c) Given the fact

$$56 + 17 = 73$$

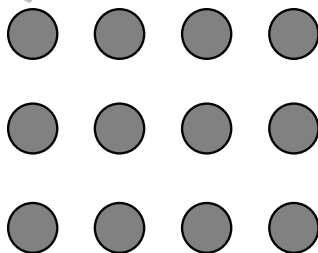
complete, without doing any written calculations:

(i)  $57 + 17 = \dots\dots\dots$  (1)

(ii)  $56 + \dots\dots\dots = 72$  (1)

(iii)  $156 + 117 = \dots\dots\dots$  (1)

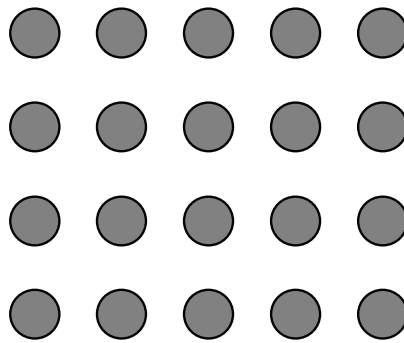
3. This pattern



has 3 rows of 4 dots, or 4 columns of 3 dots; that is 12 dots altogether.

These can be written as  $3 \times 4 = 12$  or  $4 \times 3 = 12$

(a) Now look at this pattern.



Fill in the gaps.

(i) The pattern has ..... rows of ..... dots. (1)

(ii) The pattern has ..... columns of ..... dots. (1)

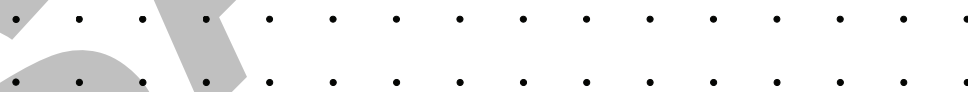
(iii) These can be written as .....  $\times$  ..... = .....

or .....  $\times$  ..... = ..... (1)

(b) On the dotted grid below, Jane has drawn a strip of squares.



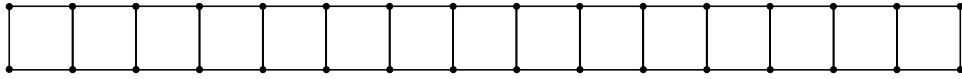
(i) On the dotted grid below, draw a strip of squares which is twice as long as Jane's strip.



(2)

Year 3 Maths Test 2

- (ii) How many strips of 4 squares could you cut from the strip below, and how many squares would be left over?

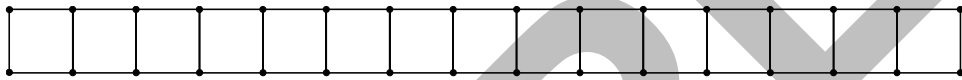


Answer: You could cut ..... strips of 4 squares, with ..... squares left over. (2)

- (iii) Is 15 a multiple of 4?

Answer: (yes / no) ..... (1)

- (c) (i) How many strips of 3 squares could you cut from the strip below?



Answer: ..... strips of 3 squares (1)

- (ii) Is 15 a multiple of 3?

Answer: (yes / no) ..... (1)

4. (i) The table below shows part of a multiplication square.

<b>X</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	
<b>1</b>	1	2	3	4	5	6	7	8	9	10	
<b>2</b>	2	4	6			12	14	16	18	20	(1)
<b>3</b>	3	6		12	15			24	27	30	(2)
<b>4</b>	4	8	12	16		24	28			40	(2)
<b>5</b>	5	10	15		25	30		40	45	50	(1)

Complete the multiplication square.

(ii) The number 12 is a **multiple** of 2 and 3 and 4.

Use your complete table in part (i) to help you to fill in these gaps **using 2, 3, 4 and 5**

(a) 15 is a multiple of ..... and ..... (1)

(b) 16 is a multiple of ..... and ..... and 8 (1)

(c) 18 is a multiple of ..... and ..... and 6 and 9 (1)

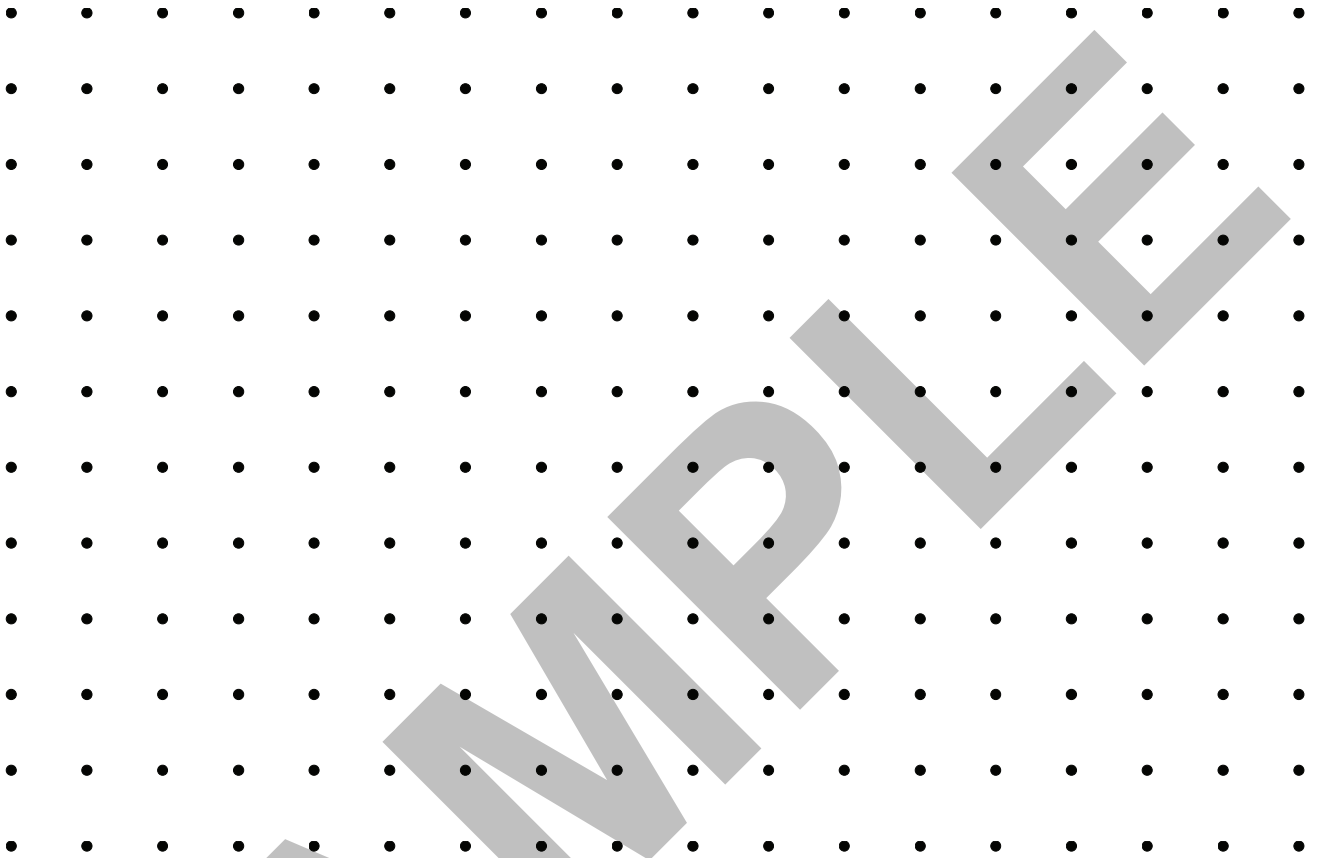
(d) 20 is a multiple of ..... and ..... and ..... and 10 (1)

Year 3 Maths Test 2

5. (a) Tom's teacher has asked him to draw a rectangle on the grid below measuring 5 cm by 3 cm.

He has to draw the rectangle so that it has the largest number of dots completely inside it.

- (i) Draw accurately at least two 5 cm by 3 cm rectangles on the grid. (4)



- (ii) What is the largest number of grid dots which can fit completely inside a 5 cm by 3 cm rectangle?

Answer: ..... (2)

- (b) Showing clearly how you do this, find how many multiples of 4 are smaller than 100

4 counts as a multiple of 4

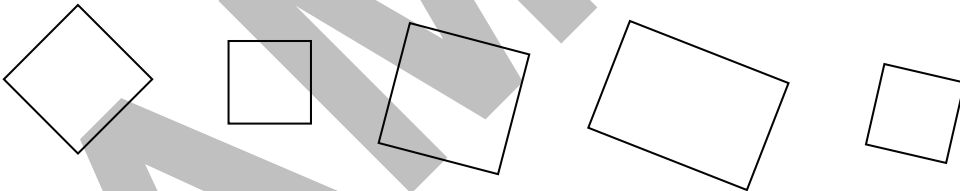
Answer: The number of multiples of 4 smaller than 100 is ..... (3)

6. In each part of this question, circle the odd one out and explain why it is the odd one out.

- (a) 13      53      14      21      35

.....  
..... (2)

- (b)



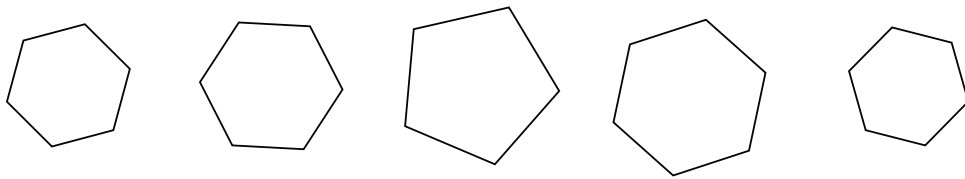
.....  
..... (2)

- (c) 16      24      8      30      32

.....  
..... (2)

Year 3 Maths Test 2

(d)

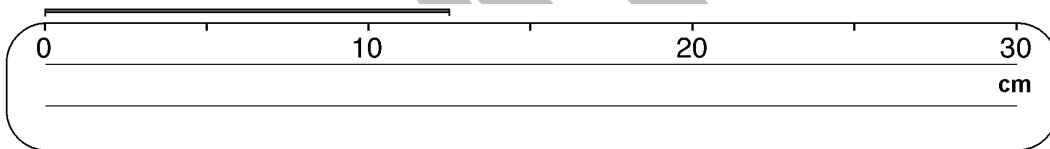


.....  
..... (2)

(e) 12      201      53      111      33

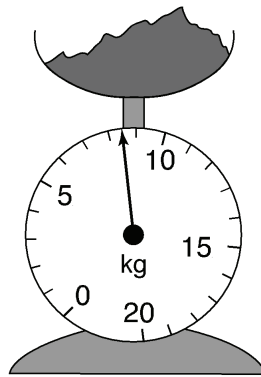
.....  
..... (2)

7. (a) What measurement is shown on this ruler?



Answer: ..... cm (2)

(b) (i) What measurement is shown on this balance?

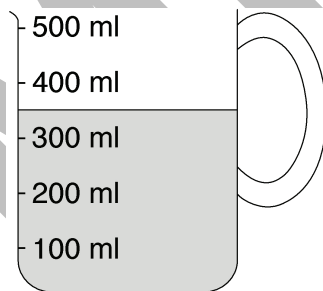


Answer: ..... kg (2)

(ii) What would be the scale reading if 500 grams were taken out?

Answer: ..... kg (2)

(c) (i) How many millilitres of water are in this jug?



Answer: ..... ml (2)

(ii) What would be the measurement if a quarter of a litre was poured out?

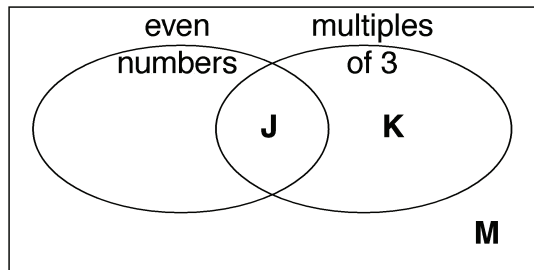
Answer: ..... ml (2)

Year 3 Maths Test 2

8. (a) A bag contains counters numbered 1 to 10

Four children have each picked a counter.

John, Katie and Mark have written their initials in the correct regions of the Venn diagram below.



(i) What is the number on John's counter (J)?

Answer: ..... (1)

The number on Katie's counter (K) is larger than the number on John's counter.

(ii) What is the number on Katie's counter?

Answer: ..... (1)

The number on Lisa's counter (L) is 8.

(iii) Write the number on Lisa's counter (L) in the correct region of the diagram. (1)

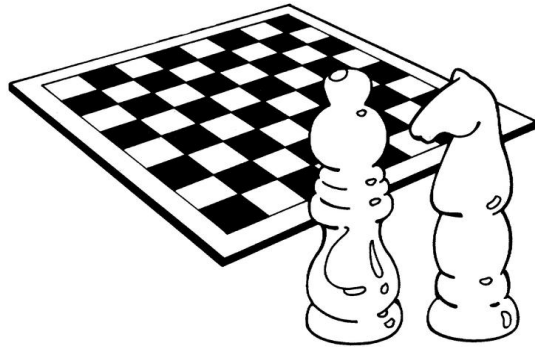
(iv) List all the possibilities for the number on Mark's counter (M).

Answer: ..... (2)

- (b) In Mr Mackay's class, 10 children play chess and half that number do not play chess.

6 boys play chess and 3 girls do not play chess.

don't play chess		
play chess		
	boys	girls



Use the Carroll diagram above to help you to find

- (i) how many girls play chess

Answer: ..... (1)

- (ii) how many boys do not play chess

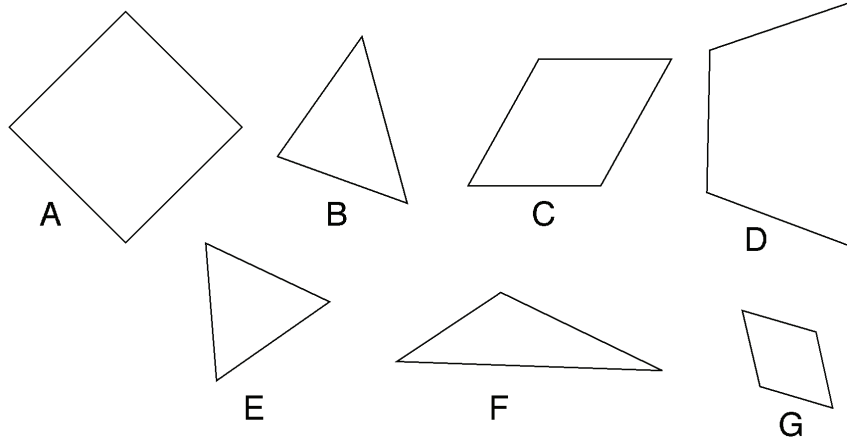
Answer: ..... (2)

- (iii) how many children there are in Mr Mackay's class.

Answer: ..... (2)

Year 3 Maths Test 2

9. (a) Sort these shapes into two different groups and write what the members of each group have in common.



Answer:

First group: .....

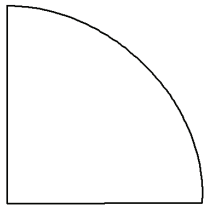
all .....

Second group: .....

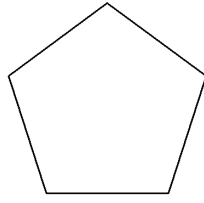
all .....

(2)

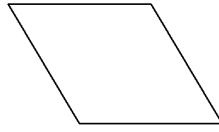
- (b) Sort these shapes into 2 different groups and write what the members of each group have in common.



H



I



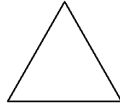
J



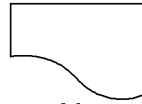
K



L



M



N

Answer:

First group: .....

all .....

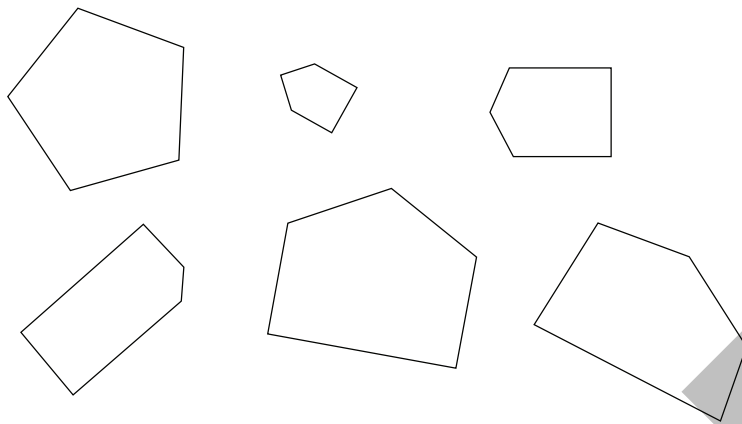
Second group: .....

all .....

(3)

SAMPLE

(c) (i) Draw a shape which would fit into the group below.



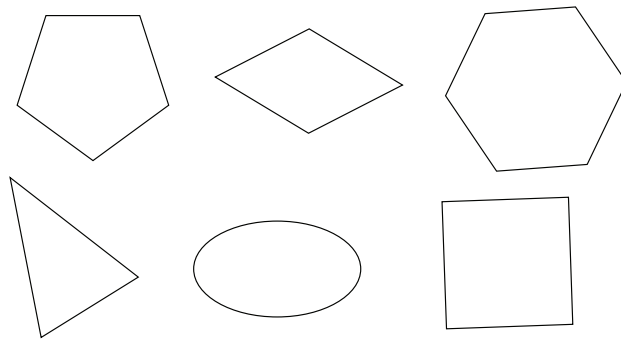
(2)

(ii) Why does your shape fit into this group?

Answer: .....

(1)

(d) What do the members of this group all have in common?

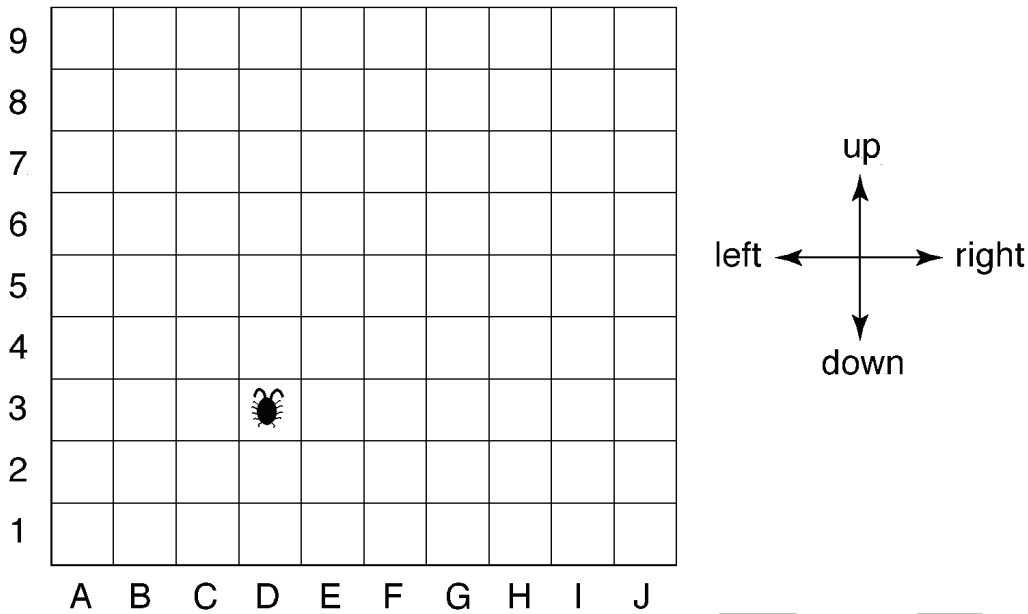


Answer: .....

..... (2)

SAMPLE

10. The diagram below shows a woodlouse resting on square D3 of a grid.



The arrows show the directions, up, down, right and left, on the page.

For each part of this question, the woodlouse starts at square D3.

(i) Name the square which the woodlouse would finish on if it moved

(a) up 5 squares

Answer: ..... (1)

(b) right 4 squares

Answer: ..... (1)

(c) down 1 square and then left 2 squares

Answer: ..... (2)

(d) left 1 square, up 4 squares, right 5 squares and finally down 3 squares.

Answer: ..... (2)

- (ii) Give two different sets of instructions for getting from D3 to B6.

Answer:

Route 1: .....

..... (2)

Route 2: .....

..... (2)

SAMPLE

# ISEB Assessments Year 3 Maths Test 2 Answers

Author: David E Hanson



This document consists of a full set of answers to the questions in Year 3 Maths Test 2.

Total marks: 100

These answers are part of *Year 3 Maths Test 2.zip*, which also contains:

*Year 3 Maths Test 2.pdf*

(the test)

*Year 3 Maths Test 2 Teacher's Document.pdf*

(the teacher's document)

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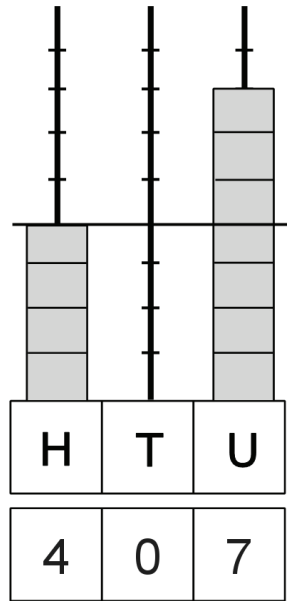
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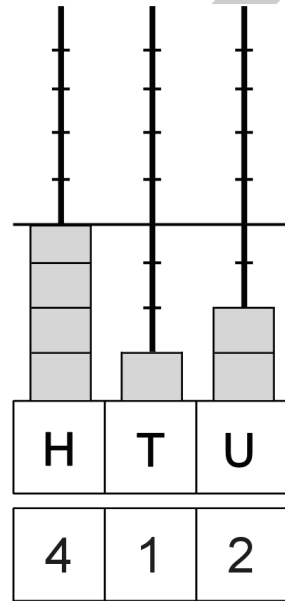
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**Year 3 Maths Test 2 Answers**

1. (a) (i) Three hundred and forty seven (1)  
 (ii) One thousand, two hundred and five (1)
- (b) (i) 120 (1)  
 (ii) 13023 (2)
- (c) (i) 50 (1)  
 (ii) 500 (1)
- (d) (i) 407 (1)  
 (ii) (1)



**A**



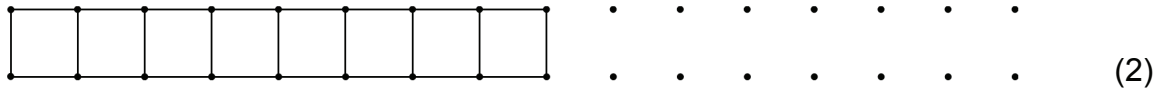
**B**

(2)

2. (a) (i) 41 (1)  
 (ii) 23 (1)  
 (iii) 18 (1)  
 (iv) 18 (1)
- (b) (i) 118 (1)  
 (ii) 48 (1)  
 (iii) 48 (1)
- (c) (i) 74 (1)  
 (ii) 16 (1)  
 (iii) 273 (1)

3. (a) (i) The array has 4 rows of 5 dots. (1)  
 (ii) The array has 5 columns of 4 dots. (1)  
 (iii) These can be written as  $4 \times 5 = 20$  or  $5 \times 4 = 20$  (1)

(b) (i)



(ii) You could cut 3 strips of 4 squares, with 3 squares left over. (2)

(iii) no (1)

(c) (i) 5 strips of 3 squares (1)

(ii) yes (1)

4. (i)

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50

(ii) (a) 15 is a multiple of 3 and 5 (1)

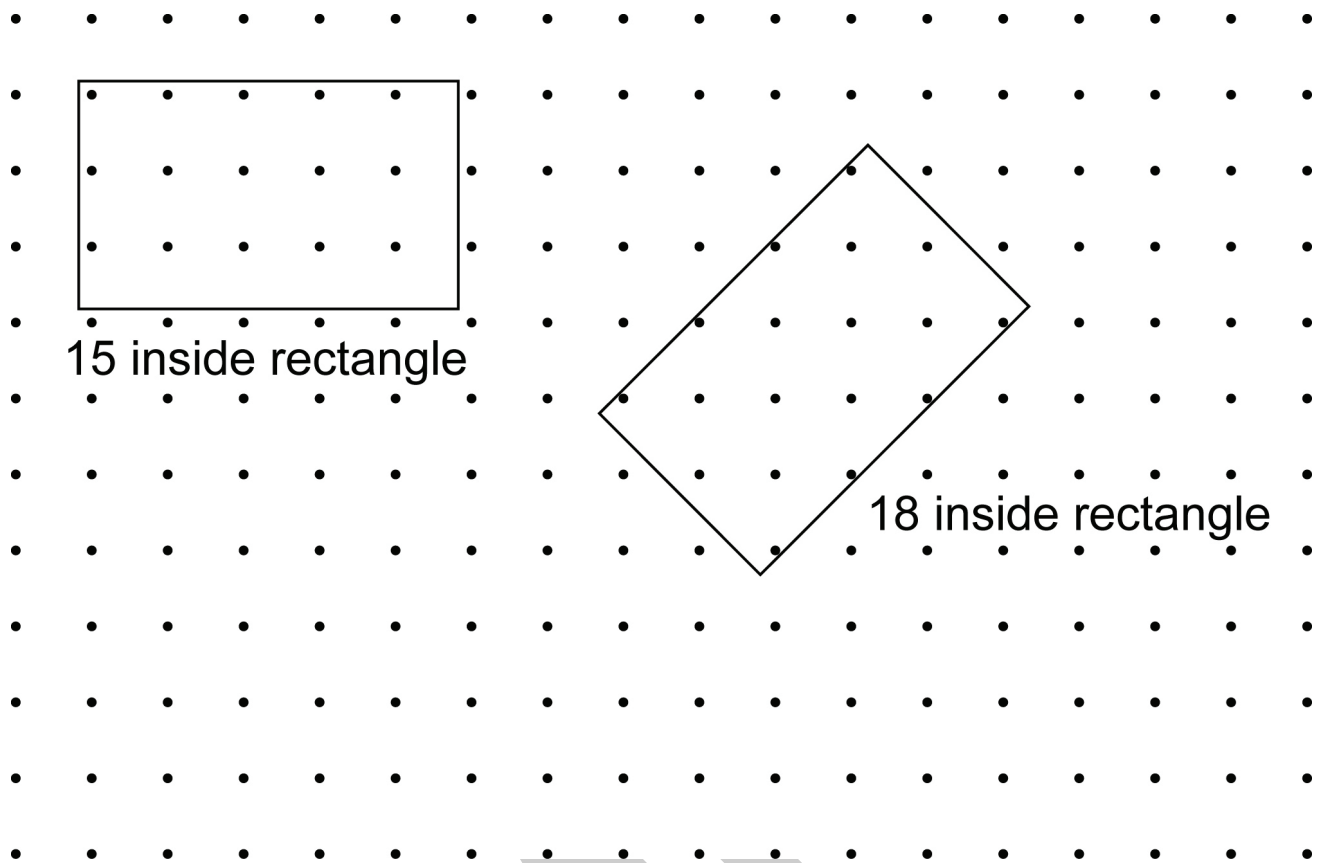
(b) 16 is a multiple of 2 and 4 and 8 (1)

(c) 18 is a multiple of 2 and 3 and 6 and 9 (1)

(d) 20 is a multiple of 2 and 4 and 5 and 10 (1)

Year 3 Maths Test 2 Answers

5. (a) (i) Rectangles drawn may vary. For example:



(ii) 18 (3)

Note that 20 dots can only fit if some of the dots intersect the sides of the rectangle, which is not allowed.

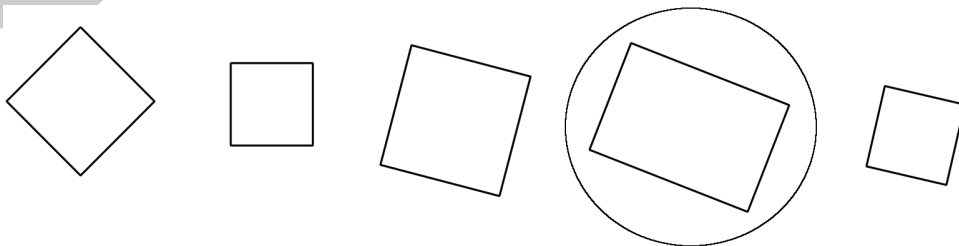
(b) The number of multiples of 4 smaller than 100 is 24 (3)

6. Answers may vary – allow marks for any reasoned alternative answer.

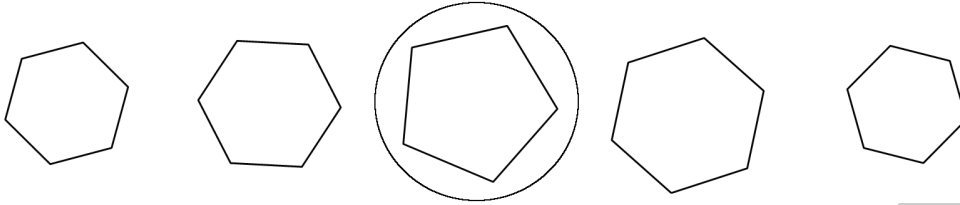
Here are the most likely answers:

(a) 14, because it is the only even number. (2)

(b) The rectangle, because the others are squares. (2)

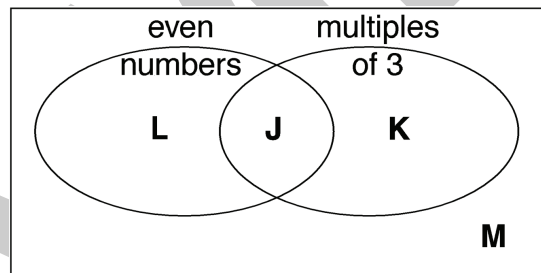


- (c) 30, because all the other numbers are multiples of 4 (2)
- (d) The pentagon, because the others are all hexagons. (2)



- (e) 53, because it is the only number which is not divisible by 3 (2)

7. (a) 12.5 cm (2)
- (b) (i) 8.5 kg (2)  
(ii) 8 kg (2)
- (c) (i) 350 ml (2)  
(ii) 100 ml (2)
8. (a) (i) 6 (1)  
(ii) 9 (1)  
(iii)



- (iv) 1, 5, 7 (2)

(b)

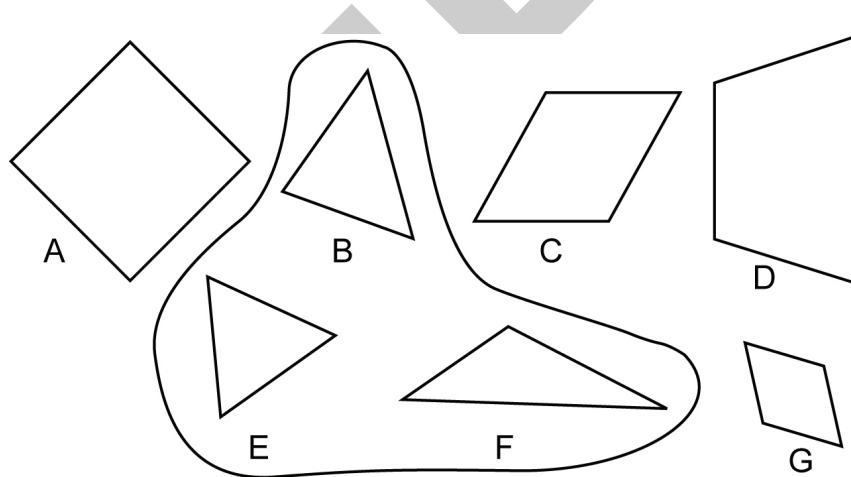
don't play chess	2	3
play chess	6	4
	boys	girls

- (i) 4 (1)  
 (ii) 2 (2)  
 (iii) 15 (2)

9. Answers may vary – allow marks for any reasoned alternative answer.

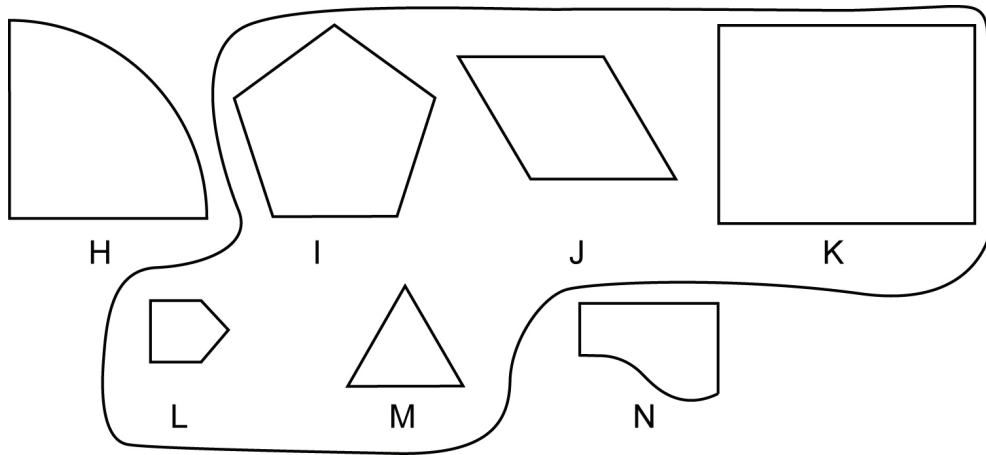
Here are the most likely answers:

(a)



- A, C, D and G all are quadrilaterals (have 4 sides). (2)  
 B, E and F all are triangles (have 3 sides).

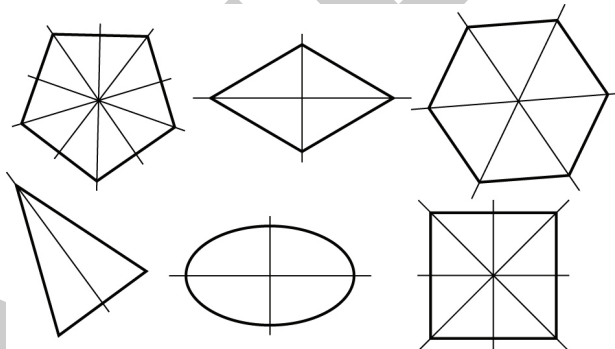
(b)



I, J, K, L and M all have only straight sides.  
H and N all have a curved side.

(3)

- (c) (i) The drawing should be of a pentagon. (2)  
(ii) All the shapes are pentagons (have 5 sides). (1)
- (d) All the shapes have reflection symmetry.

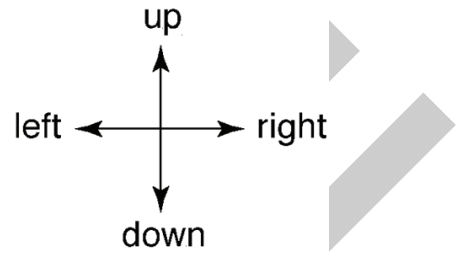
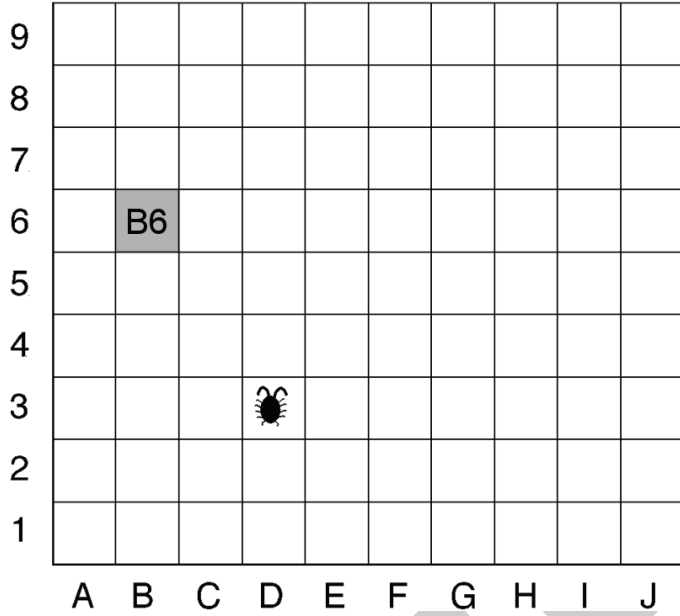


(2)

**Year 3 Maths Test 2 Answers**

10. (i) (a) D8 (1)  
 (b) H3 (1)  
 (c) B2 (2)  
 (d) H4 (2)

(ii) Answers may vary – allow marks for any route from D3 to B6.



- Route 1 (2)  
 Route 2 (2)

SAMM

# ISEB Assessments

## Year 3 Maths Test 2

### Teacher's Document



This test contains a selected set of 10 questions aimed at Year 3 pupils.  
The questions are arranged in a particular topic order as follows:

Topic	Question
Number	1
Calculations	2
	3
	4
Problems (including Handling Data)	5
	6
	7
	8
Shape, Space and Measures	9
	10

Total marks: 100

Total time allocated: 1 hour

Calculators are not allowed.

Teachers should feel free to use this resource in whatever way is most appropriate for their scheme of work. The test can be attempted all at once and is designed to take a Year 3 pupil approximately one hour to complete.

Some questions require pupils to explain their answers. If you feel that this is too demanding, pupils can be instructed to explain themselves orally to you or to the rest of the class in a discussion.

Please refer to the printing instructions provided on the next page of this teacher's document before printing copies of the test or the accompanying answers.

This teacher's document is part of *Year 3 Maths Test 2.zip*, which also contains:

*Year 3 Maths Test 2.pdf* (the test)  
*Year 3 Maths Test 2 Answers.pdf* (the answers)

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