

L6 Booster

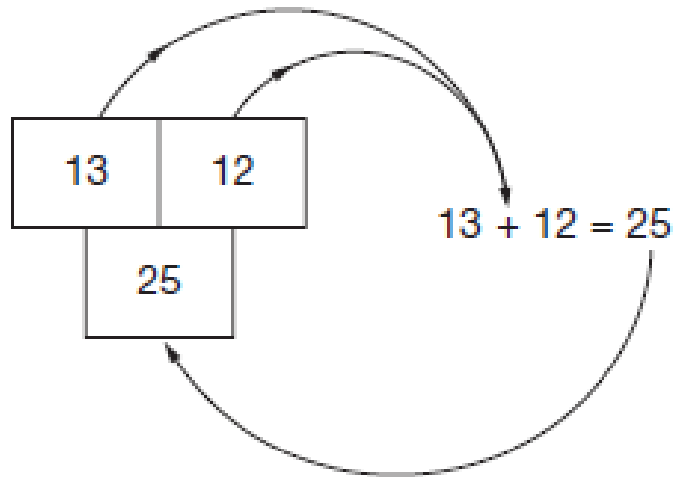
Working with Number

Name: _____

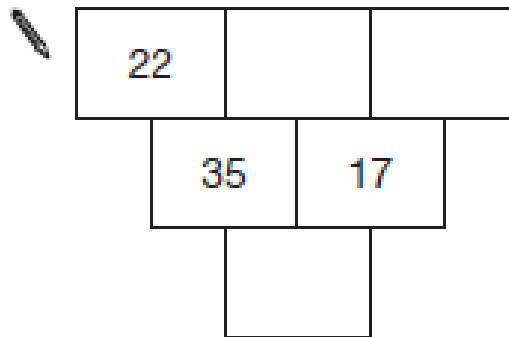
Date: _____

15. In these number grids, two numbers are added to give the number below.

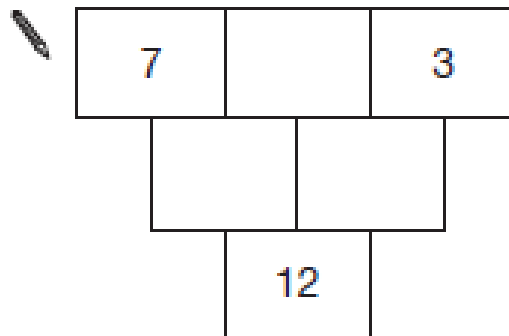
Example:



Write numbers in the number grids below to make them correct.



1 mark



1 mark

10. (a) Look at these fractions.

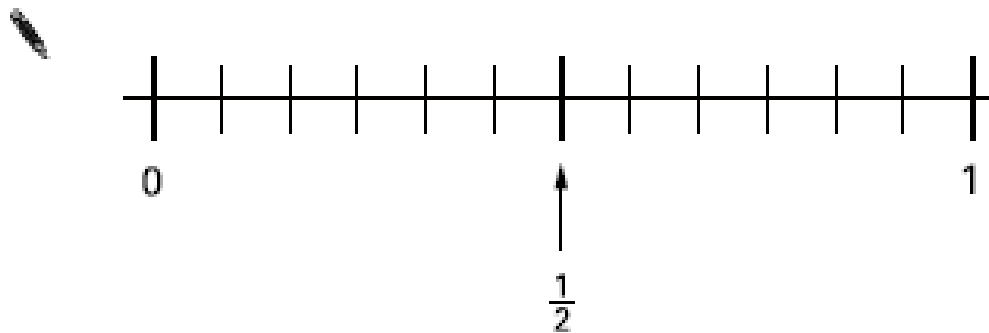
$$\frac{1}{2}$$

$$\frac{1}{3}$$

$$\frac{5}{6}$$


Mark each fraction on the number line.

The first one is done for you.



1 mark

(b) Fill in the missing numbers in the boxes.



$$\frac{2}{12} = \frac{\square}{6}$$

$$\frac{1}{2} = \frac{12}{\square}$$

$$\frac{1}{\square} = \frac{6}{24}$$

.....

2 marks

10. (a) Join all the pairs of numbers that **add** together to equal 1

The first one is done for you.

0.1	0.99
0.11	0.9
0.01	0.999
0.91	0.89
0.001	0.09

2 marks

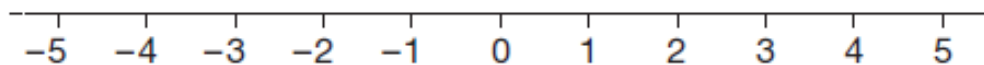
(b) Now join all the pairs of numbers that **multiply** to equal 1

The first one is done for you.

1	2
0.5	4
0.25	1
0.1	20
0.05	10

2 marks


2. Here is a number line.




It can help you work out the answers to the calculations below.

The first one is done for you.


$$-3 + 1 = \underline{-2}$$


$$-4 + 1 = \underline{\hspace{2cm}}$$

1 mark


$$-2 + 5 = \underline{\hspace{2cm}}$$

1 mark


$$3 - 5 = \underline{\hspace{2cm}}$$

1 mark

10. Write two numbers that add to 10

One of the numbers must be **positive**.

The other number must be **negative**.


$$\boxed{\hspace{2cm}} + \boxed{\hspace{2cm}} = \boxed{10}$$

1 mark

14. Fill in the missing numbers in the boxes using **only negative numbers**.



$$\square - \square = 5$$


1 mark


$$\square - \square = -5$$

1 mark



4. Write the missing numbers in the boxes.

Calculator **not** allowed

 $8 \times \boxed{} = 800$ _____
1 mark

 $0.8 \times \boxed{} = 8$ _____
1 mark

16. (a) Write the correct numbers in the gaps below.

	$1 \times 3\frac{1}{2} = 3\frac{1}{2}$	
	$2 \times 3\frac{1}{2} = 7$	
	$3 \times 3\frac{1}{2} = 10\frac{1}{2}$	
	$4 \times 3\frac{1}{2} = \underline{\hspace{2cm}}$	_____
		1 mark
	$5 \times 3\frac{1}{2} = \underline{\hspace{2cm}}$	_____
		1 mark
	$6 \times 3\frac{1}{2} = 21$	

Use the table to help you work out this calculation.

 $60 \times 3\frac{1}{2} = \underline{\hspace{2cm}}$ _____
1 mark

(b) Is the answer to $11 \times 3\frac{1}{2}$ a whole number?



Yes

No

Explain your answer.



1 mark

20. Work out



$$\frac{1}{4} + \frac{1}{3} =$$

1 mark

$$\frac{3}{5} - \frac{1}{15} =$$


1 mark

1 mark

5. Look at the calculation below.

Write the correct digits in the boxes.

Calculator **not** allowed



4	3	
---	---	--

 +

2		8
---	--	---

 =

	7	5
--	---	---

20. Here are six number cards.

2 marks



(a) Arrange these six cards to make the calculations below.

The first one is done for you.

939 =

4	2	3
---	---	---

 +

5	1	6
---	---	---

 **1164** =

--	--	--

 +

--	--	--

1 mark

750 =

--	--	--

 +

--	--	--

1 mark

(b) Now arrange the six cards to make a **difference** of 115

 **115** =

--	--	--

 -


--	--	--

1 mark


6. Write the missing digits in each calculation below.

The first one is done for you.

$$\begin{array}{|c|c|} \hline 1 & 9 \\ \hline \end{array} \times 3 = \begin{array}{|c|c|} \hline 5 & 7 \\ \hline \end{array}$$


$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} \times 3 = \begin{array}{|c|c|} \hline 5 & 1 \\ \hline \end{array}$$

1 mark



$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} \times 3 = \begin{array}{|c|c|} \hline 4 & \\ \hline \end{array}$$

1 mark

7. (a) Henry thinks of a number **between 1 and 20**

He thinks of the number **12**

For each question below, tick (✓) Yes or No for Henry's number.

	Yes	No
 Is it an even number?		
Is it a multiple of 3?		
Is it a factor of 18?		

(b) Ashraf also thinks of a number **between 1 and 20**

The table shows information about his number.

	Yes	No
Is it an even number?		✓
Is it a multiple of 3?	✓	
Is it a factor of 18?		✓

What is Ashraf's number?

11. Work out the following.

$$1.2 \times 6$$



1 mark

$$1.2 \div 6$$



1 mark

10. Lisa uses a grid to multiply 23 by 15


×	20	3
10	200	30
5	100	15

$$200 + 100 + 30 + 15 = 345$$

Answer: 345

Now Lisa multiplies two different numbers.

Complete the grid, then give the answer below.



×	_____	40	3
30	_____	_____	_____
_____	600	_____	18



Answer: _____

3 marks

8 Work out the missing numbers below.

The first one is done for you.

The first multiples of add to 60

(because $4 + 8 + 12 + 16 + 20 = 60$)



The first multiples of add to 60

(1 mark)

Now use **different** numbers to complete the sentence below.



The first multiples of add to 60

(1 mark)

26. For each sequence below, tick (✓) the correct box to show if it is **increasing**, **decreasing** or **neither**.



				increasing	decreasing	neither
$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$\frac{6}{13}$	$\frac{7}{12}$	$\frac{8}{11}$	$\frac{9}{10}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{4}{8}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$\frac{3}{2}$	$\frac{4}{3}$	$\frac{5}{4}$	$\frac{6}{5}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 marks

25. Look at this information.

$$\frac{27}{40} = 0.675$$

$$\frac{29}{40} = 0.725$$

Use this information to write the missing **decimals** below.



$$\frac{31}{40} = \underline{\hspace{2cm}}$$

1 mark



$$\frac{23}{40} = \underline{\hspace{2cm}}$$

1 mark

11. Fill in the missing numbers.



$$\frac{1}{2} \text{ of } 20 = \frac{1}{4} \text{ of } \dots\dots\dots$$

1 mark

$$\frac{3}{4} \text{ of } 100 = \frac{1}{2} \text{ of } \dots\dots\dots$$

1 mark

$$\frac{1}{3} \text{ of } 60 = \frac{2}{3} \text{ of } \dots\dots\dots$$

1 mark

15. (a) Put these values in order of size with the smallest first.

5^2

3^2

3^3

2^4



smallest

largest

3 marks

(b) Look at this information.

5^5 is 3125

What is 5^7 ?



3 marks

28. Show that the difference between 3^2 and 3^3 is 18



1 mark

12. (a) Two numbers **multiply** together to make **-15**
They **add** together to make **2**

What are the two numbers?



..... and

1 mark

- (b) Two numbers **multiply** together to make **-15**,
but **add** together to make **-2**

What are the two numbers?



..... and

1 mark

- (c) Two numbers **multiply** together to make **8**,
but **add** together to make **-6**

What are the two numbers?



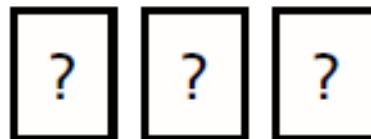
..... and

1 mark

- (d) The square of 5 is 25
The square of **another** number is also 25

What is that other number?

18. Here are three number cards.
The numbers are hidden.



The **mode** of the three numbers is 5

The **mean** of the three numbers is 8

What are the three numbers?

Show your working.



.....
.....
2 marks

19. On a farm 80 sheep gave birth.

30% of the sheep gave birth to two lambs.

The rest of the sheep gave birth to just one lamb.

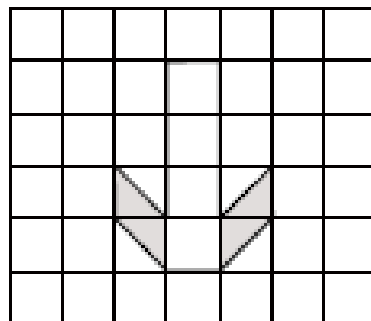
In total, how many lambs were born?

Show your working.



13. (a) What **fraction** of this shape is shaded?
Write your fraction as simply as possible.

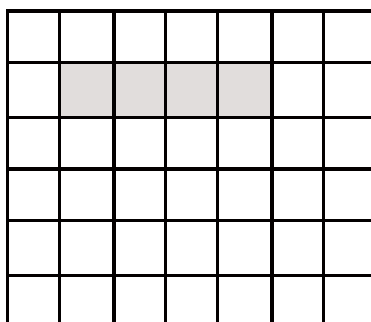




.....
1 mark

- (b) What **percentage** of this shape is shaded?

 %



.....
1 mark

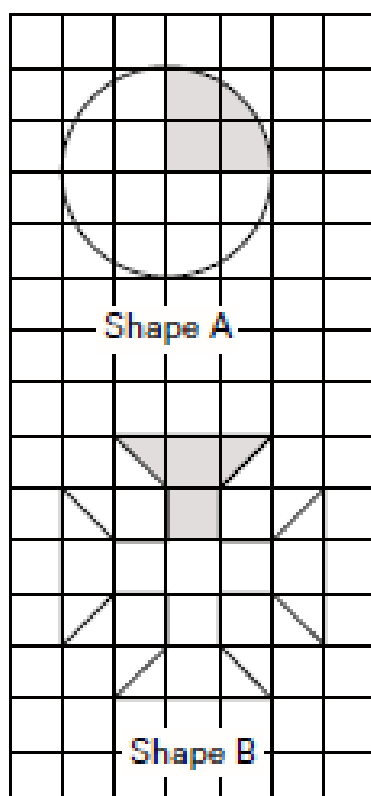
- (c) Which shape has the **greater percentage** shaded?

Tick (✓) the correct box.




- Shape A
 Shape B
 Both the same

Explain how you know.



.....
1 mark

14. (a) Write the missing numbers.

 50% of 80 = _____

5% of 80 = _____

1% of 80 = _____

2 marks

(b) Work out 56% of 80

You can use part (a) to help you.

 _____

1 mark

14. (a) Work out 5% of 360



1 mark

(b) Work out 15% of 360

You can use part (a) to help you.



1 mark