

Name: \_\_\_\_\_



**Factors and**

**Multiples**

**Additional Tasks**





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## Quiz 1



1)  $4^2$

2)  $5^2$

3)  $6^2$

4)  $2^3$

5)  $3^3$

6)  $4^3$

7)  $7^2 + 1^2$

8)  $5^3 - 8^2$

9)  $10^3 - 10^2$

\_\_\_ out of 9



### Example 1



Without a calculator, calculate the mean and range of the following numbers.      7, 3, 6, 10, 2, 1, 6, 7, 4, 2

The mean :

$$\begin{aligned} & \underbrace{7 + 3 + 6}_{10} + \underbrace{10 + 2 + 1 + 6}_{19} + \underbrace{7 + 4 + 2}_{19} \\ & = 10 + 19 + 19 \\ & = 48. \end{aligned}$$

$$48 \div 10 = \underline{4.8}$$

The Range:

$$10 - 1 = \underline{9}$$

The mean is the total divided by the number of data items.

The range is the greatest number subtract the least number.





## Quiz 2

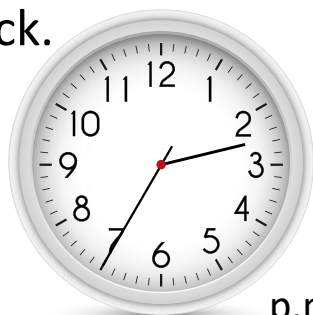


1) Circle the multiples of 3.

45    85    114

327    414    927

2) Write the time in the 24-hour clock.



p.m.

3) What type of angle is the angle  $90^\circ$ ?

4)  $2.7 + 1.5$

5) 10% of £56

6)  $7 \times 8$

7) Write the number 7,050,000 in words.

8) A carton of milk costs 74p. How much would 3 cartons cost?

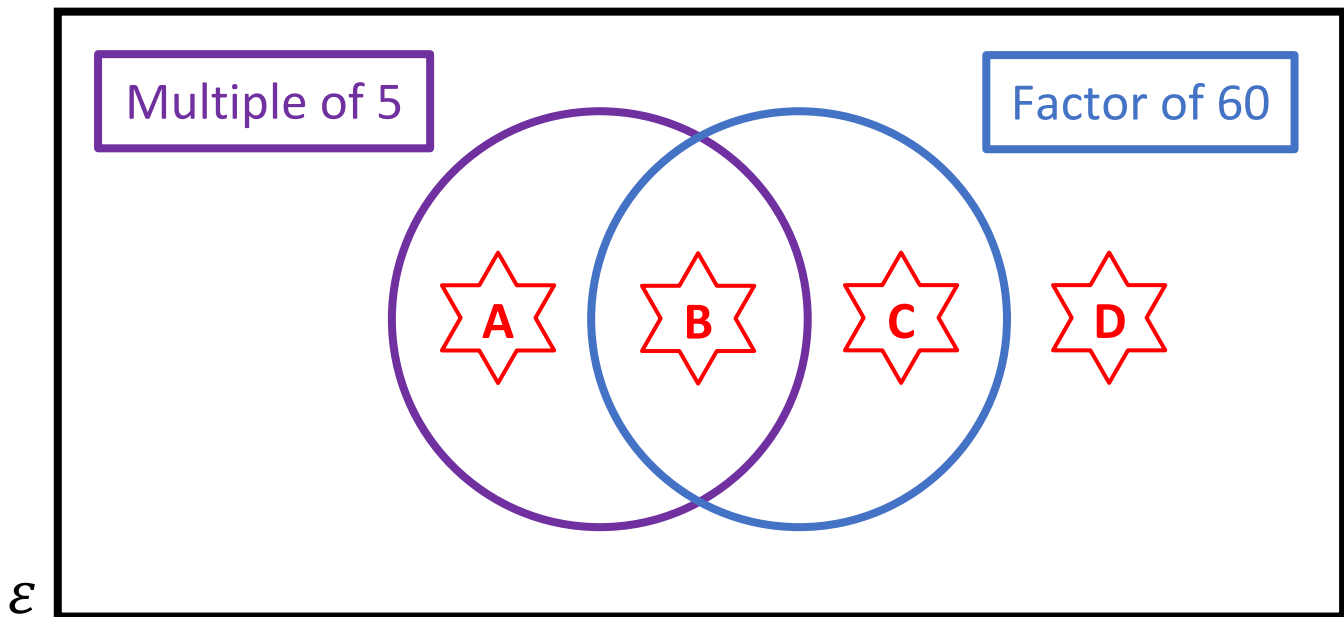


9) How many days are there in December?

— out of 9



Venn Diagram Challenge 1



Think of a number that could fit into each region.  
If you think a region is impossible to fill, explain why!











## Example 2



Shade the least number of squares so that the dotted lines are symmetry lines.

The grid contains a 6x6 sub-grid with the following pattern of shaded squares:

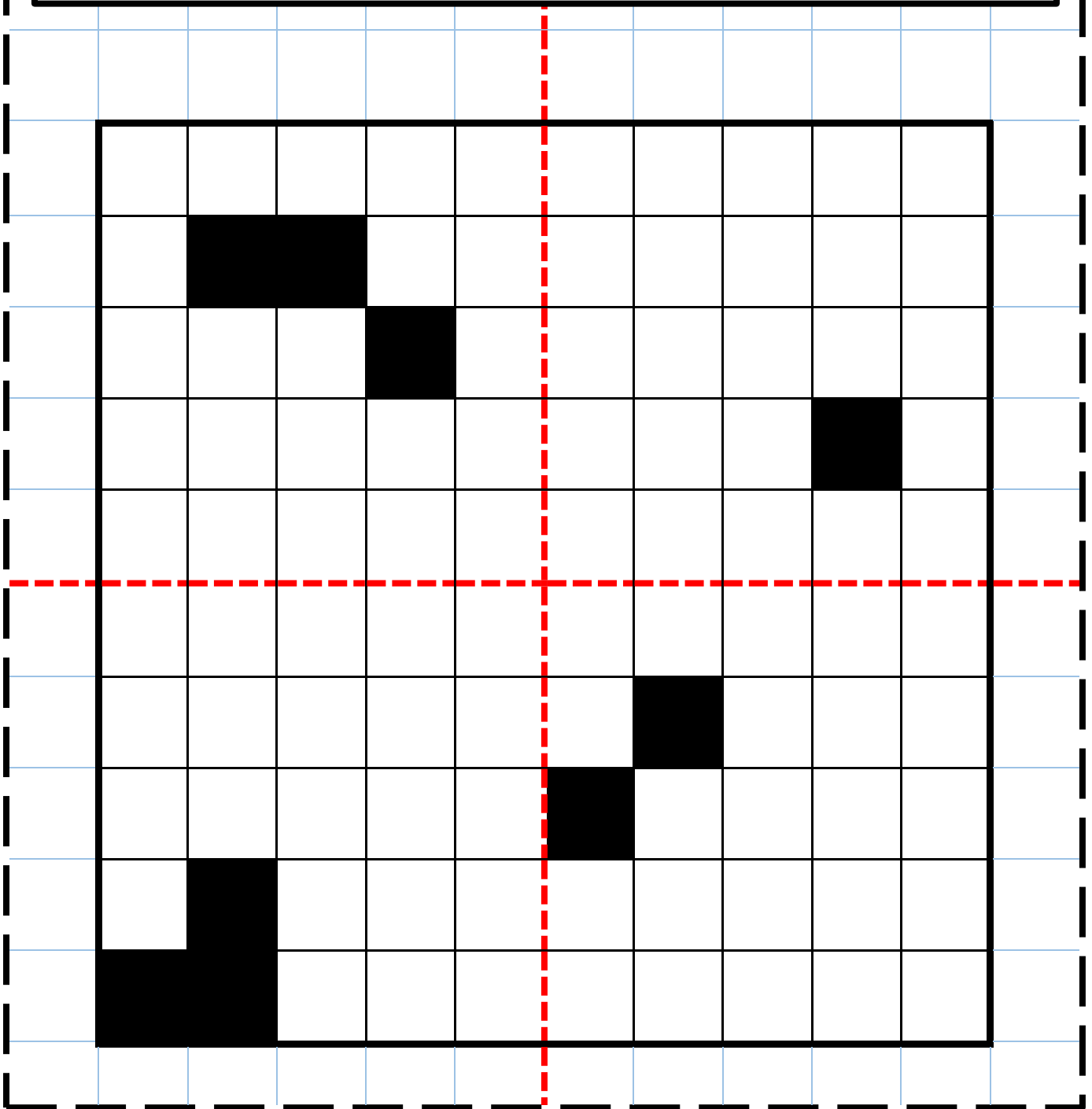
		Green			Green
		Black	Green	Green	Green
		Black	Green	Green	Green
			Green	Black	
			Green	Green	
		Green	Green	Black	Green
		Green		Green	
		Black			Green



## Exercise 2



Shade the least number of squares so that the dotted lines are symmetry lines.



\_\_\_ out of 4



## Quiz 3

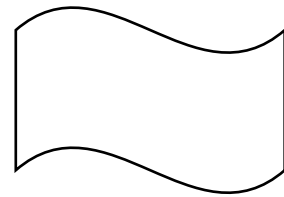


1) Shade 50% of the shape below.



2) How many days are there in a leap year?

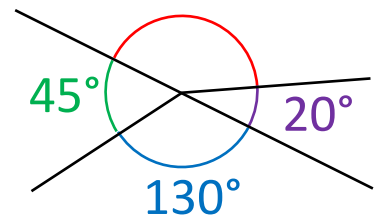
3) What is the order of symmetry of the shape below?



4)  $5 - 3.7$

5)  $3.6 \times 100$

6) Calculate the size of the red angle.



7) Is 91 a multiple of 7?

8) List all the factors of 18.

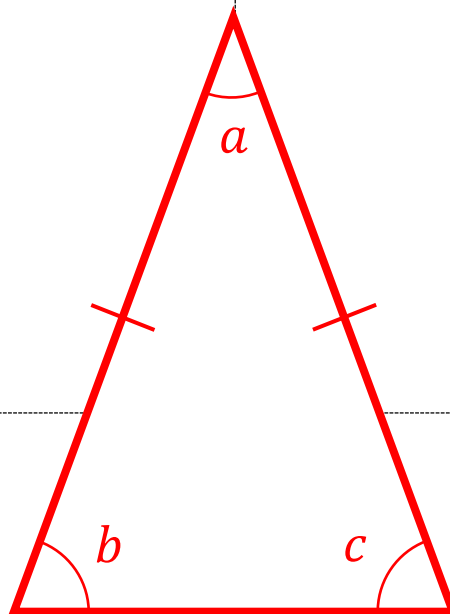
9)  $8^2$

\_\_\_ out of 9



1) If  $a = 40^\circ$ , what is the size of the angles  $b$  and  $c$ ?

2) If  $b = 40^\circ$ , what is the size of the angles  $a$  and  $c$ ?



3) If  $a$  is double  $b$ , what is the size of the angles  $a$ ,  $b$  and  $c$ ?

4) If  $a$  is half of  $b$ , what is the size of the angles  $a$ ,  $b$  and  $c$ ?

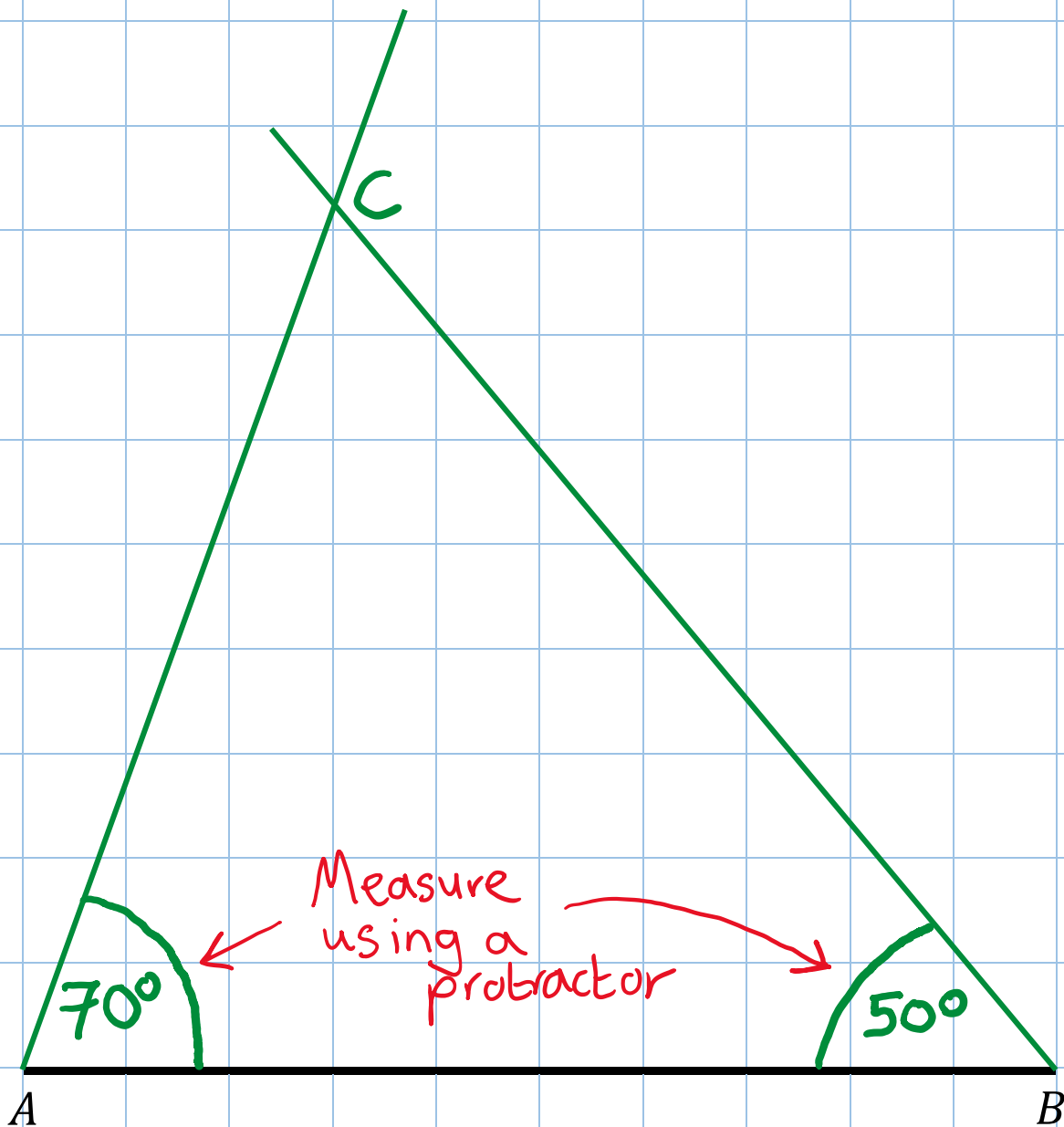




## Example 3



Draw a triangle  $ABC$  where  $\hat{A} = 50^\circ$  and  $\hat{B} = 70^\circ$ .  
(The line  $AB$  has been drawn for you.)

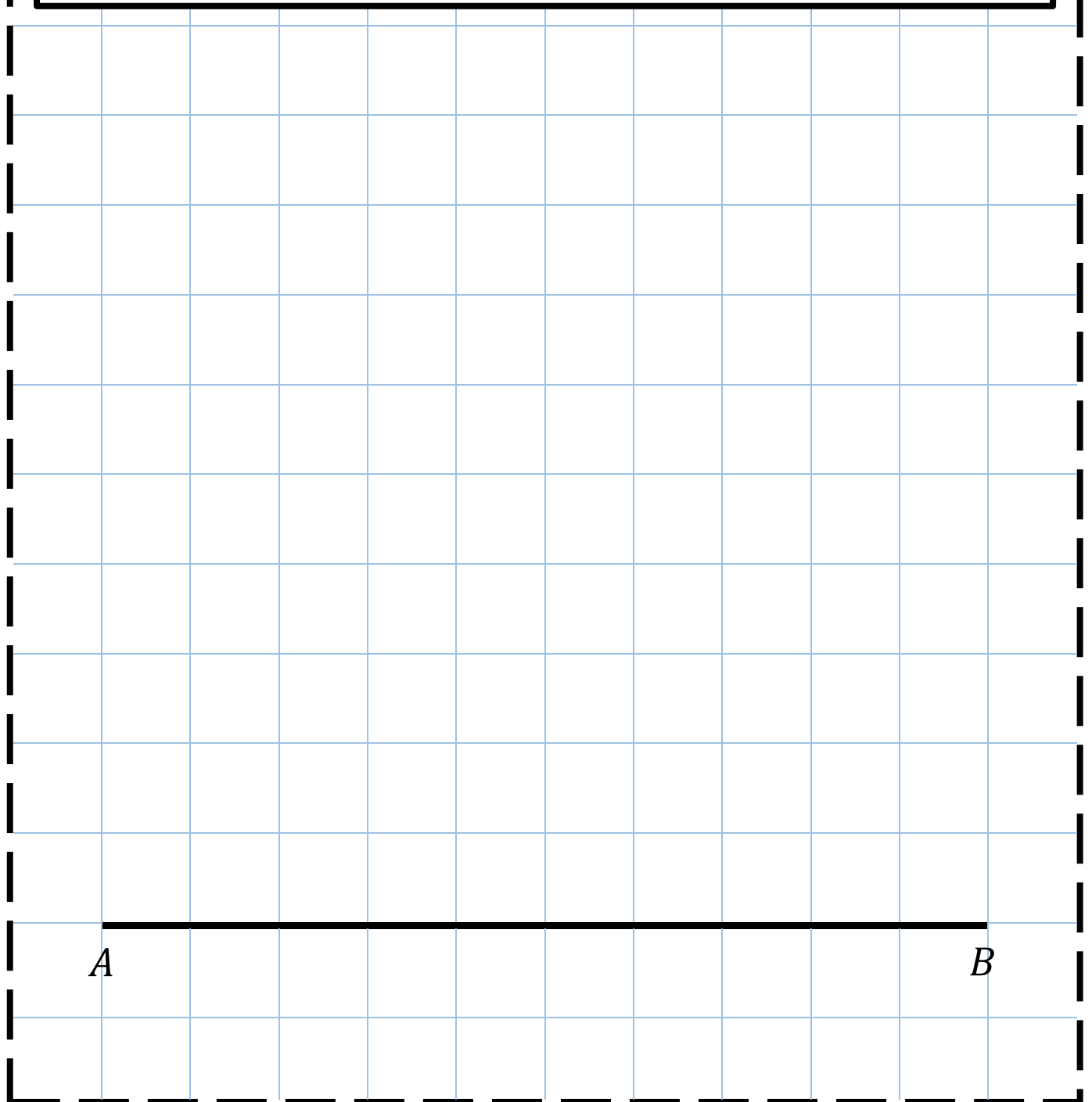




## Exercise 3



Draw a triangle  $ABC$  where  $\hat{A}BC = 80^\circ$  and  $\hat{B}AC = 40^\circ$ .  
(The line  $AB$  has been drawn for you.)



\_\_\_ out of 3



**Quiz 4**

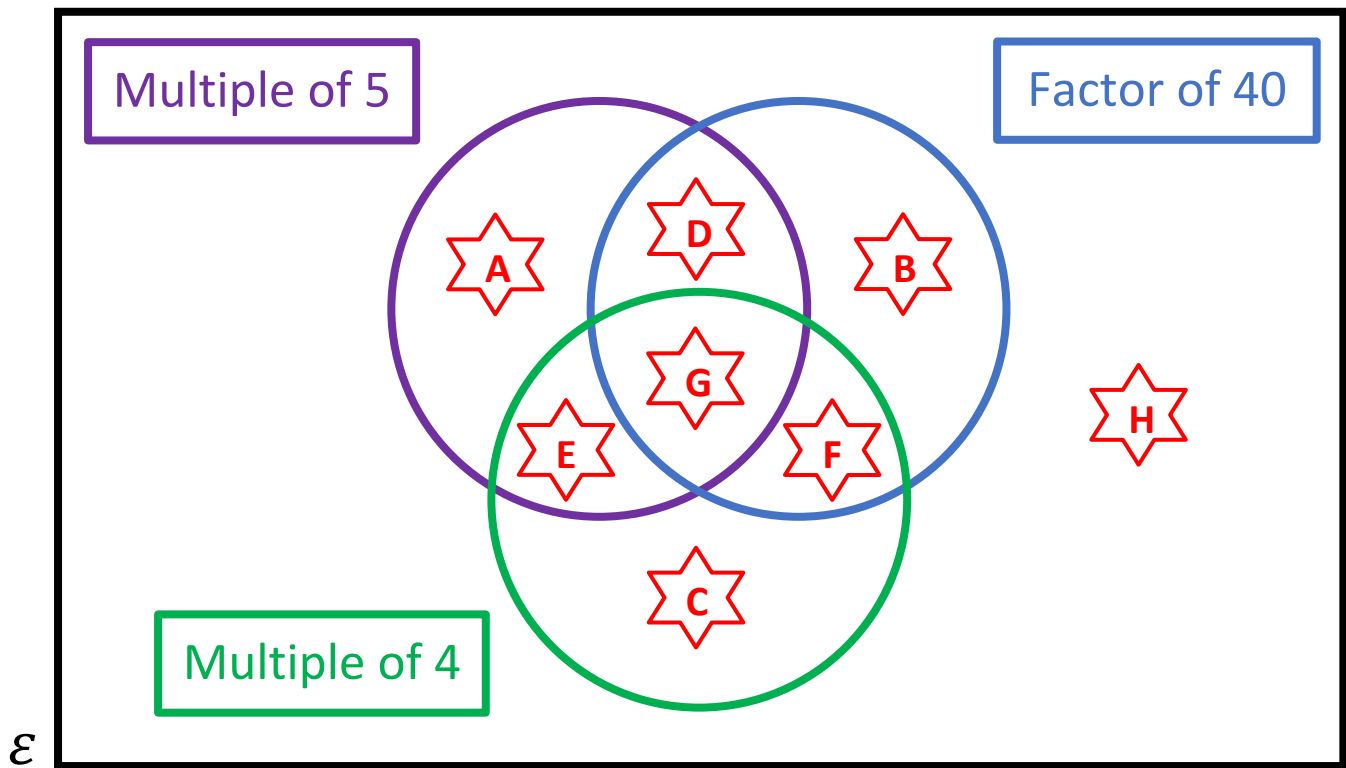


<p>1) Is 27 a prime number?</p>	<p>2) How many edges does a hexagon have?</p>	<p>3) How many years are there in half a century?</p>								
<p>4) <math>13 \times 6</math></p>	<p>5) <math>\sqrt{36}</math></p>	<p>6) In which quadrant is the coordinate <math>(-3, 6)</math>?</p>								
<p>7) How much money is here?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="padding: 2px 10px;">1p</td> <td style="padding: 2px 10px;">23 pieces</td> </tr> <tr> <td style="padding: 2px 10px;">2p</td> <td style="padding: 2px 10px;">7 pieces</td> </tr> <tr> <td style="padding: 2px 10px;">5p</td> <td style="padding: 2px 10px;">5 pieces</td> </tr> <tr> <td style="padding: 2px 10px;">10p</td> <td style="padding: 2px 10px;">3 pieces</td> </tr> </table>	1p	23 pieces	2p	7 pieces	5p	5 pieces	10p	3 pieces	<p>8) Explain how to calculate the range of some data.</p>	<p>9) Circle all the factors of 8.</p> <div style="text-align: center; margin-top: 10px;"> <p>1    2    3    4</p> <p>5    6    7    8</p> </div>
1p	23 pieces									
2p	7 pieces									
5p	5 pieces									
10p	3 pieces									

\_\_\_\_\_ out of 9



# Venn Diagram Challenge 2



Think of a number that could fit into each region.  
 If you think a region is impossible to fill, explain why!

★ A		★ E	
★ B		★ F	
★ C		★ G	
★ D		★ H	



### Example 4



Showing all your working, explain whether the years 1834 and 1936 were leap years.

$$\begin{array}{r}
 0458 \text{ r } 2 \rightarrow \text{Remainder } 2 \\
 4 \overline{) 1'8^2 3^3 4} \\
 \hline
 \end{array}$$

so 1834 was not a leap year

$$\begin{array}{r}
 0484 \rightarrow \text{Remainder } 0 \\
 4 \overline{) 1'9^3 3'6} \\
 \hline
 \end{array}$$

so 1936 was a leap year.





## Quiz 5



1) List all the factors of 34.

2)  $\sqrt[3]{64}$

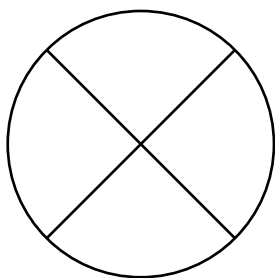
3)  $6.4 + 2.95$

4) What type of angle is the angle  $5^\circ$ ?

5) Calculate 20% of £60.

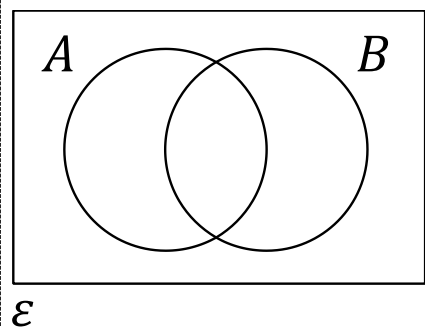
6) How many days are there in April?

7) Shade 25% of the shape below.

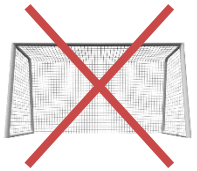


8) The mean of 8, 4, 9

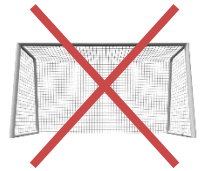
9) Shade  $A \cap B$ .



\_\_\_ out of 9



## The Soil and Seeds



**£3.88**



Elin buys 2 bags of soil and 3 packets of seeds.  
She receives a discount of 25%, and pays with a £20 note.  
What can you calculate from this information?

## Evaluating the Workbook



## Notes



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