1. Jay likes to read.
On Monday she reads 57 pages
On Tuesday she reads 33 pages.
She now has one quarter of the book left to read.

How many pages does the book have?

……(3)

---

2. Lisa has 3 metres of string.
She cuts the string into 4 pieces.
The first piece is 40 cm long and the second piece is 1.42 m
The third and the fourth pieces of string are exactly the same size.

How long are each of the third and fourth pieces?

……(3)

---

3. Here are two fractions: $\frac{3}{4}$ and $\frac{4}{5}$

Which is the larger fraction?
You must show your working to explain your answer.

……(2)

---

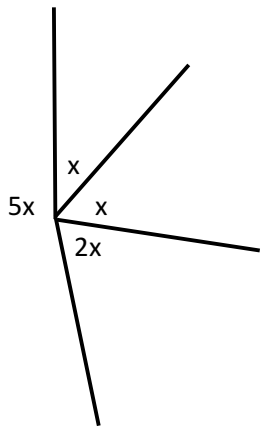
4. Find the value of m

(8 x R) - 5 = 11

……(2)

---

5. Calculate the size of the largest angle in this diagram.



……(3)

---

6. Arrange the following numbers in order of size from the smallest to the largest:

$\frac{1}{4}$ 0.35 30% $\frac{2}{5}$ 0.28

……(2)

---

7. At night time the temperature is -4^{0} C

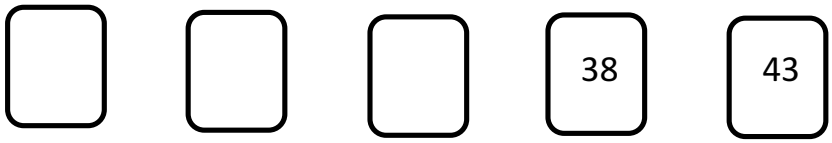
In the daytime it rises by 7^{0} C

What is the daytime temperature?

……(1)

8.(a) I count in **equal steps**

My fourth number is 38 and my fifth number is 43

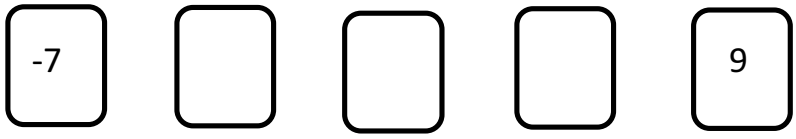


What is my first number?

……(3)

(b) I count in **equal steps**

My first number is -7, my fifth number is 9

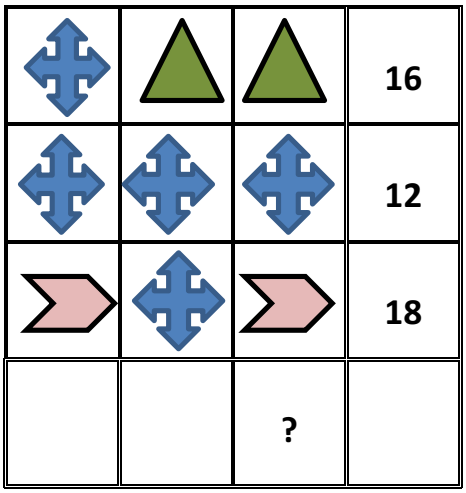


What is my third number?

……(4)

---

9. Each shape in this grid is hiding a particular number, so that the three shapes in any row or column add up to the value written at the end of that row or column



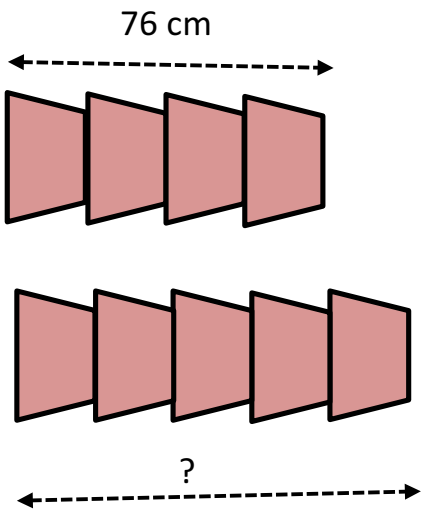
Work out the number that should replace the **?**

.....(4)

---

10. Angela has some tiles that are all of the same size.
She joins four of these tiles to make a length of 76 cm

She puts one more tile on the end



Work out the length of the five tiles.

.....(2)

---

11. Look at these equations

$$8 = x + 3$$

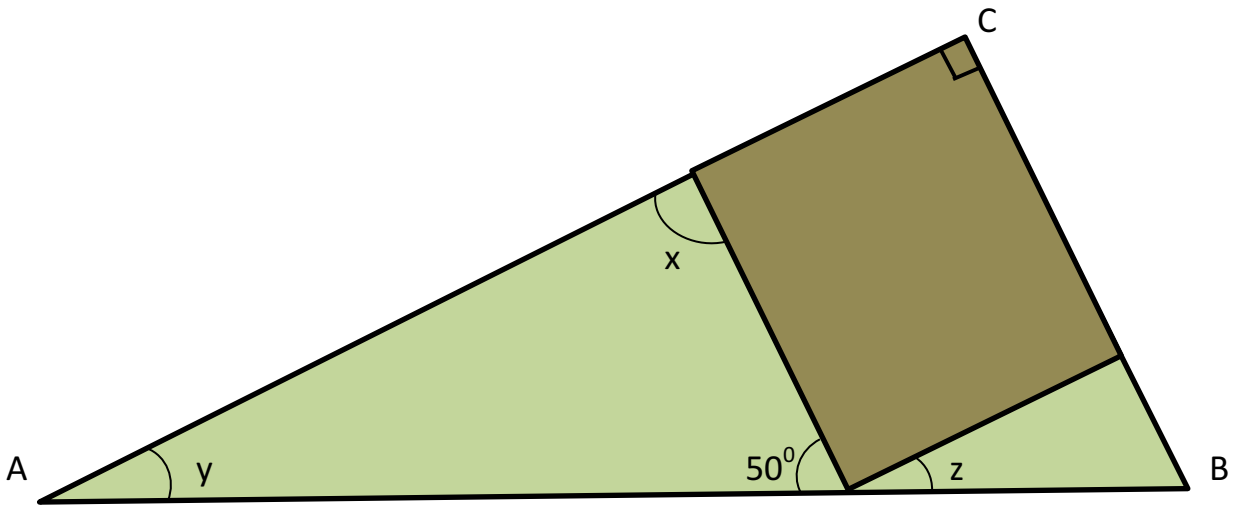
$$y + 2 = 10 + x$$

Use both equations to work out the value of y

……(3)

---

12. The right-angled triangle ABC is below



The square fits exactly inside the triangle.

Work out the value of the angles x, y and z

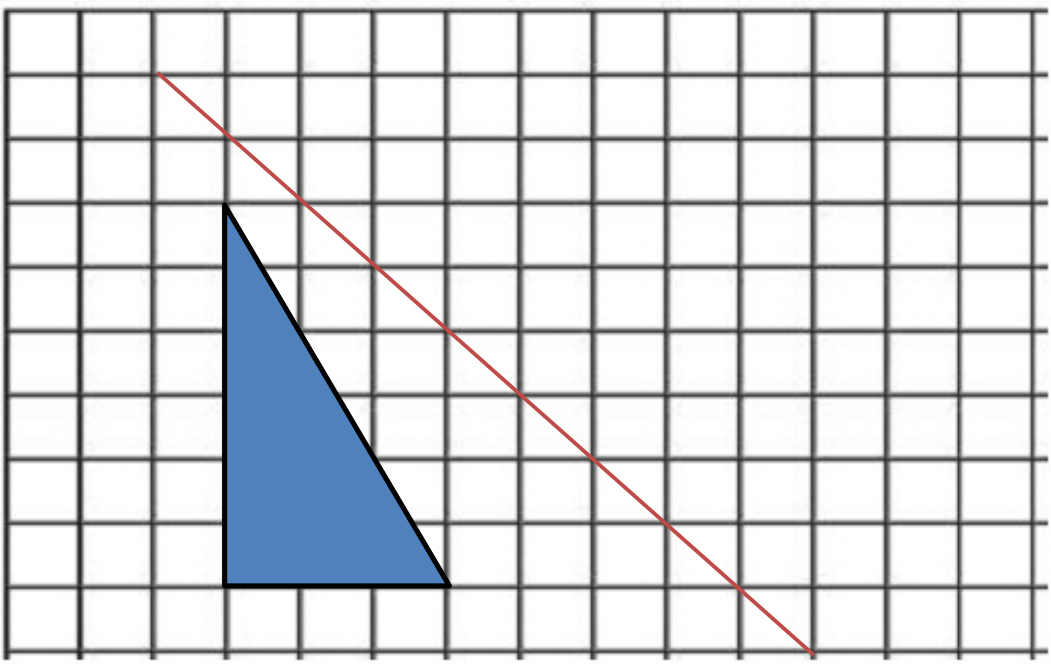
x = …… (1)

y = …… (1)

z = …… (1)

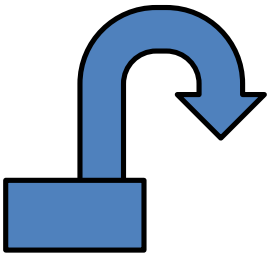
---

13. Draw the reflection of this triangle in the mirror line shown (2)



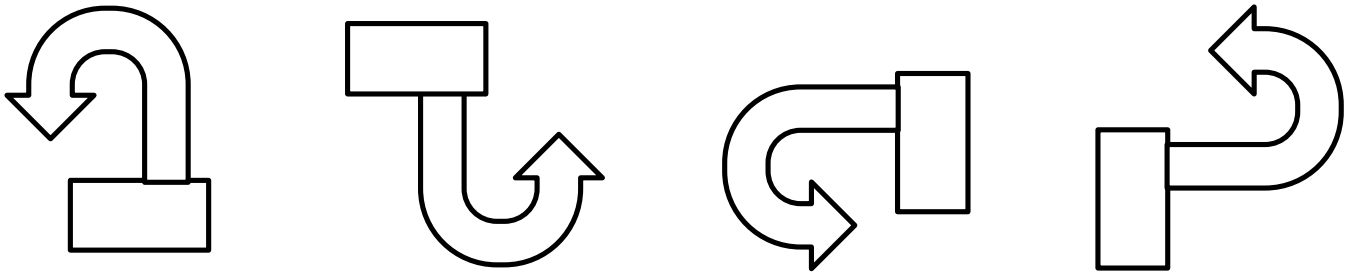
14. Yusef cuts this shape out of cardboard and he paints it blue.

The other side is white.



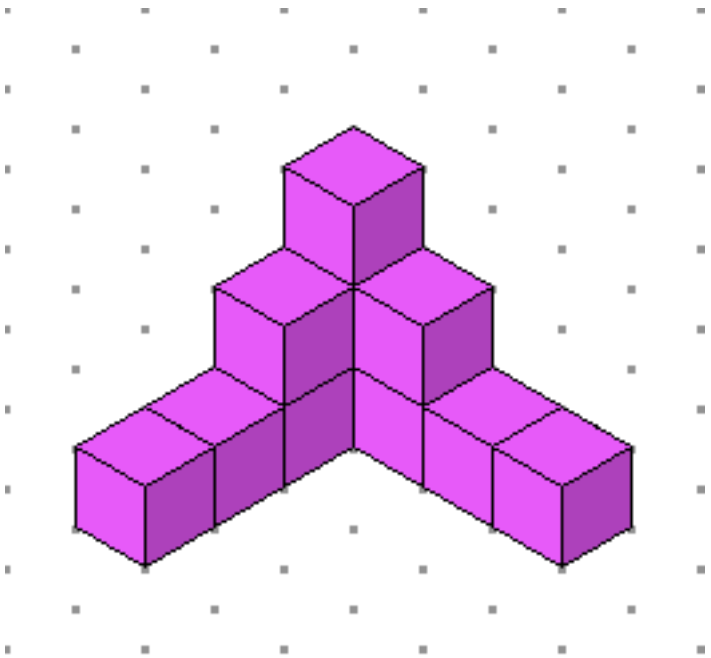
He turns it over so that the white side is showing

Tick all of the shapes that show the white side of Yusef's shape



(2)

15. Look at the shape drawn on the grid below



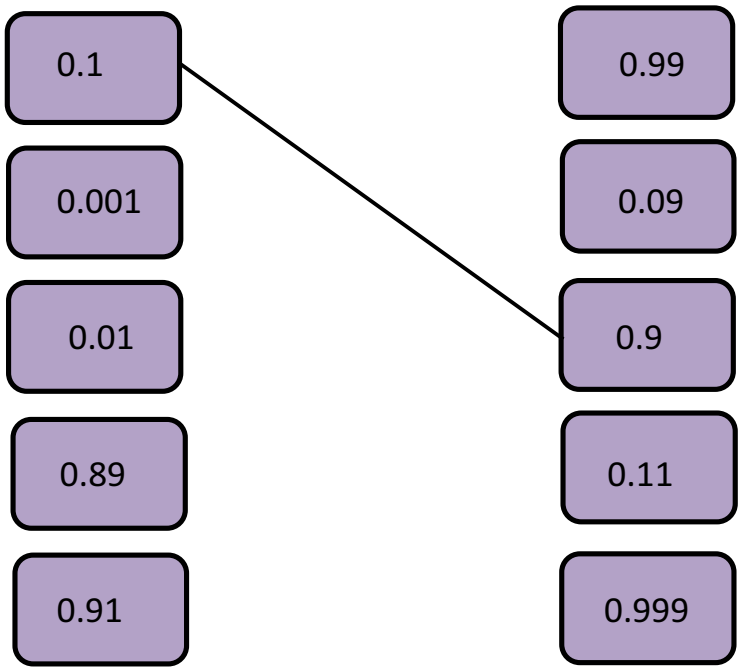
The shape has been rotated.

Part of the shape is shown below on the isometric paper.

Finish drawing the shape.

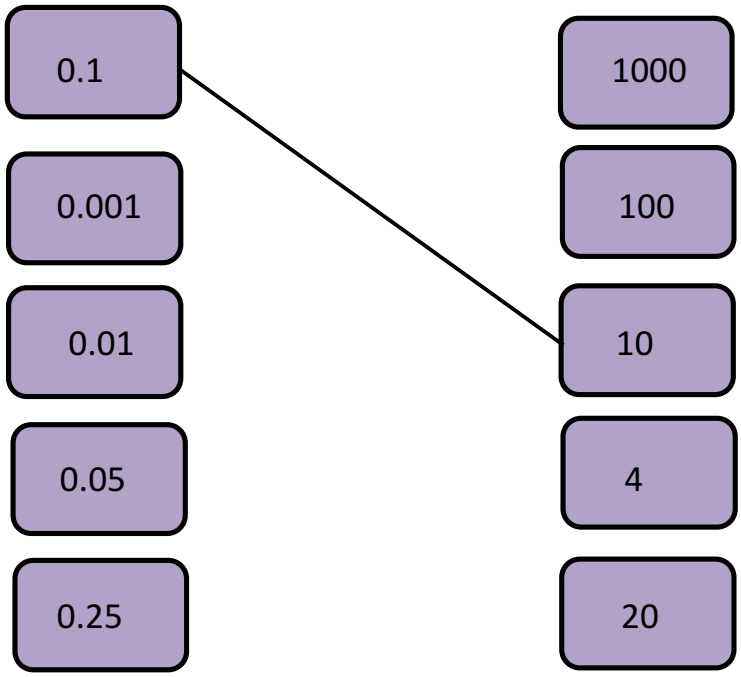
(2)

16.(a) Join all of the pairs of numbers that **add** together to equal 1
(one has been done for you)



(2)

(b) Join all of the pairs of numbers that **multiply** together to equal 1
(one has been done for you)



(2)

17. Use $p = 3$ and $q = 12$ to work out the following expressions

The first one has been done for you.

$q - p = 9$

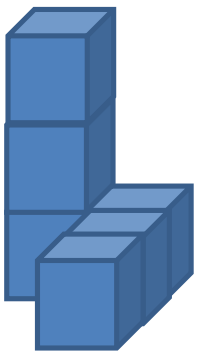
$3q + 5p =$ ..... (2)

$\frac{q}{p} =$ ..... (1)

$(p + q)^2 =$ ..... (2)

---

18. This shape is made from 1 cm cubes



a) What is the volume of this shape? .....(1)

b) Find the surface area of this shape.

.....(3)

---

19. Two numbers have a sum of 25.
The larger number is 7 more than the smaller number.

What are the two numbers ?

……(2)

---

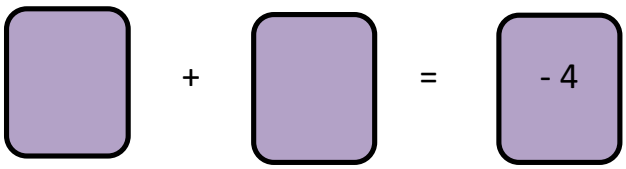
20. It takes 4 men 6 days to build a wall.

How long would it take 3 men to build the same size wall working at exactly the same speed?

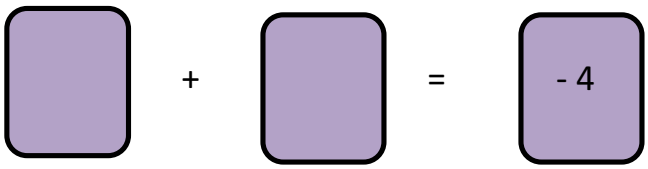
……(3)

---

21. Write a number in each box to make the calculations correct.



……(2)



……(2)

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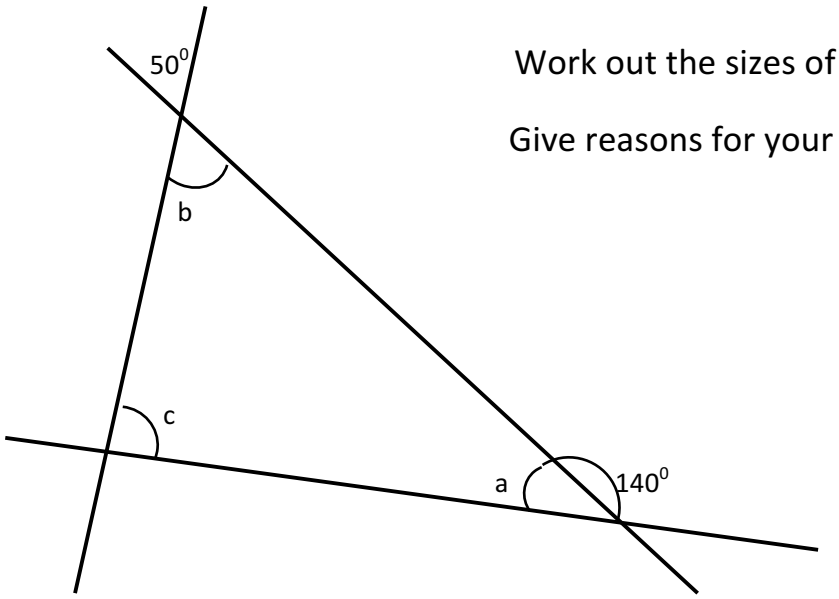
22. The diagram shows three straight lines.



Work out the sizes of angles a, b and c.

Give reasons for your answers

a = …… because ……..

…….. (2)

b = …… because ……..

…….. (2)

c = …… because ……..

…….. (2)

---

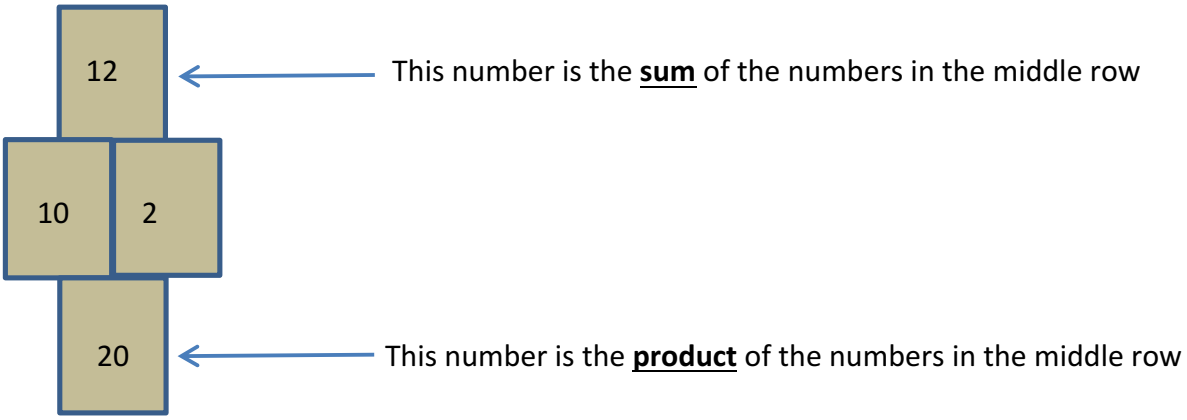
23. Concorde could travel one mile every three seconds.

How many miles per hour (mph) is that?

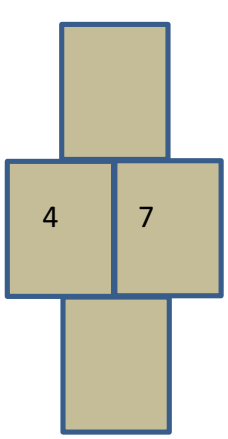
……(3)

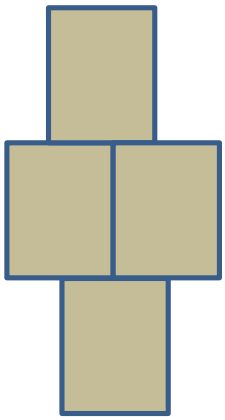
---

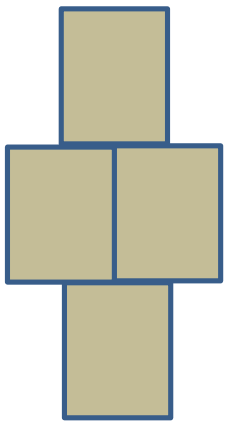
24. Here are the rules for a number grid.



Now use the rules to fill in the missing numbers in these number grids.







……(2) ……(2) ……(2)

---

25. Find the difference between 3^4 and 5^3

……(2)

---

26. a) Sarah is thinking of two numbers.

Her two numbers have a **negative sum**, but a **positive product**.
Give an example of what her numbers could be.

……(2)

b) Rob is also thinking of two numbers.

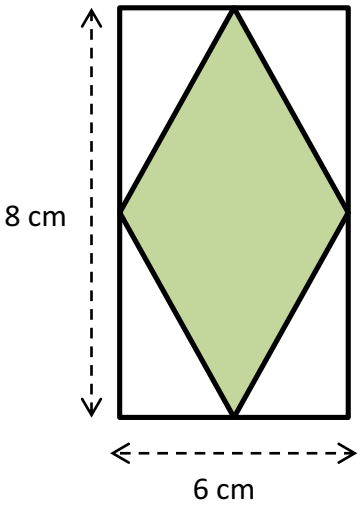
His two numbers have a **negative sum**, but a **negative product**.
Give an example of what his numbers could be.

……(2)

---

27. Inside the rectangle below there is a shaded rhombus.
The vertices of the rhombus are the midpoint of the sides of the rectangle.

What is the **area** of the shaded rhombus?



……(3)

---

28. Look at the information.

$\frac{27}{40}$ = 0.675	$\frac{29}{40}$ = 0.725

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

$\frac{31}{40}$ =	$\frac{23}{40}$

.....(4)

---

29. This table shows a recipe for a fruit drink.

Type of juice	Amount
Orange	$\frac{1}{2}$ litre
Cranberry	$\frac{1}{3}$ litre
Grape	$\frac{1}{6}$ litre
	Total 1 Litre

Charlie wants to make $1\frac{1}{2}$ litres of the same drink.

Complete the table below to show how much of each type of juice to use.
Show all of your working.

Type of juice	Amount
Orange	litre
Cranberry	litre
Grape	litre
	Total $1\frac{1}{2}$ litres

(4)

---

30. If $48 = 3 \times 2^{m}$ find the value of m

……(2)