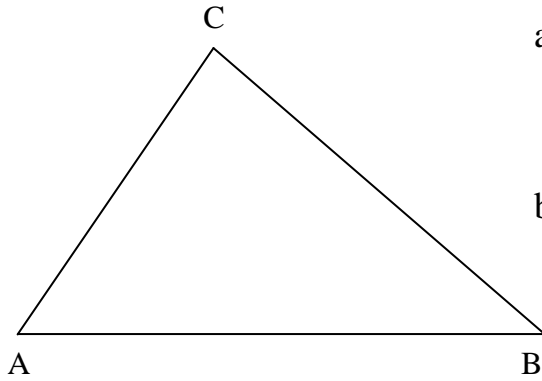


Name..... Set..... Staff.....

Attempt ALL questions and show ALL working.
Use of calculators is not permitted.

Time : 1 Hour

1.



a) Measure the length of BC in mm

BC =mm

b) Measure the size of angle A and B

Angle A =

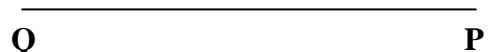
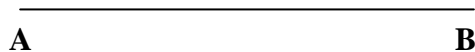
Angle B =

2. Use a protractor to construct the following angles

i) Angle B = 40°

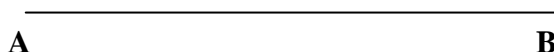
ii) Angle PQR = 50°

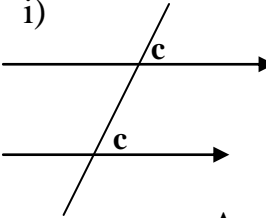
Show point R

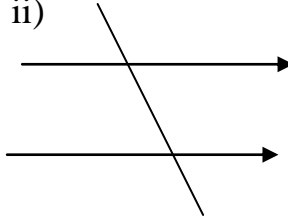


3. Complete triangle ABC with BC = 5cm and AC = 6.5cm using compasses and ruler. Label point C. Measure the size of angle C.

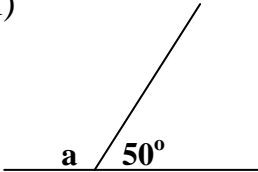
Angle C =

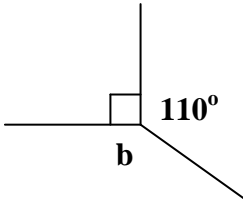


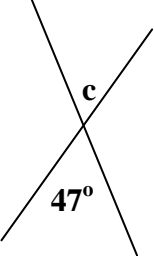
6. i)  The angles marked with the letter 'c' are equal. What are they called?
Answer

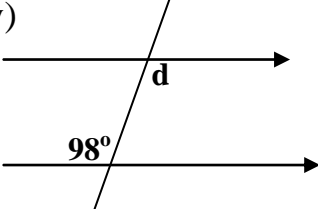
ii)  Mark with a letter 'a' one pair of alternate angles.

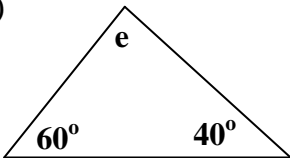
7. The following diagrams are not drawn to scale. Calculate the size of the angles marked with letters. Show all working where appropriate.

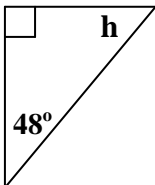
i)  $a = \dots\dots$

ii)  $b = \dots\dots$

iii)  $c = \dots\dots$

iv)  $d = \dots\dots$

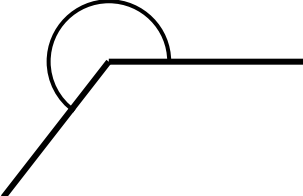
v)  $e = \dots\dots$

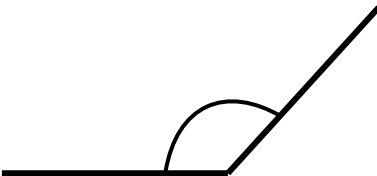
vi)  $h = \dots\dots$

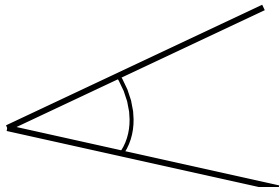
8. Complete the following table with the word used to describe the type of angle given

Angle	Type of Angle
Less than 90°
90°
Between 90° and 180°
Greater than 180°

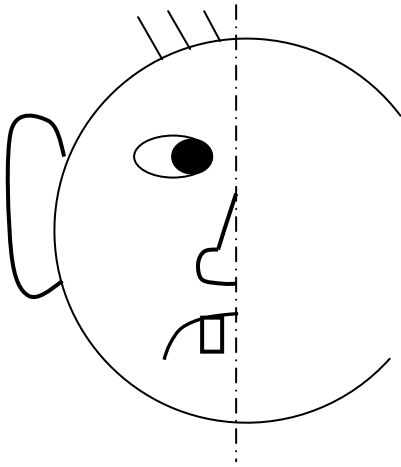
State what type each of the following marked angles is:


Answer =


Answer =


Answer =

10. (i) Complete the face so that the dotted line is a line of symmetry.

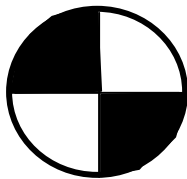


(ii) Use dotted lines to draw any lines of symmetry for this rectangle.

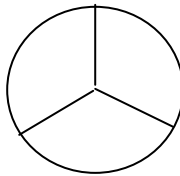


(iii) Below are the badges of three makes of German car.

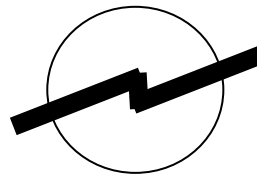
BMW



MERCEDES



OPEL

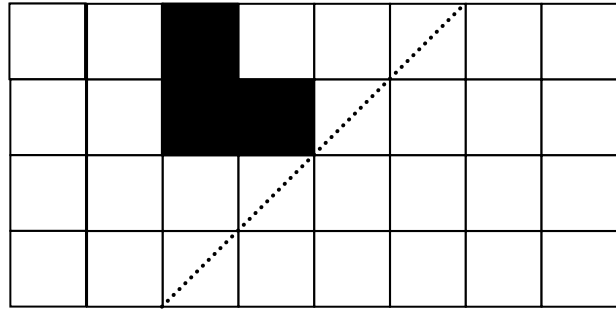


(iii) Complete the following table to give the number of lines of symmetry (if any) and the order of rotational symmetry (if any)... where there is none, write NONE.

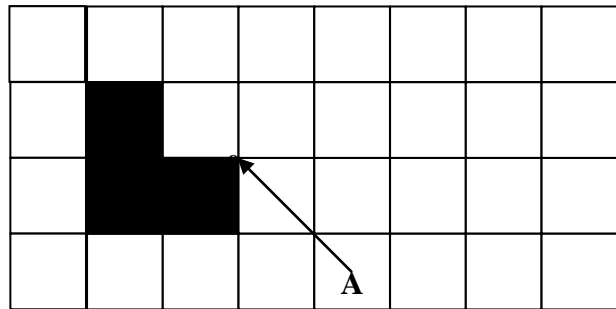
CAR	Number of lines of symmetry	Order of rotational symmetry
BMW
MERCEDES
OPEL

14. For the next three diagrams complete the given transformation (mapping).

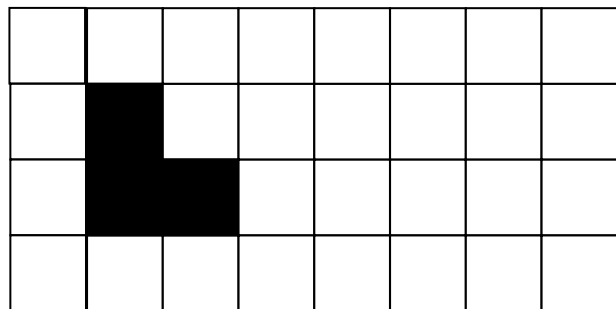
i) A reflection in the dotted line.



ii) A rotation through 180° about the point A.



iii) A translation of 3cm to the right.



15. Complete the following questions about the grid.

Point A has coordinate (... , ..)

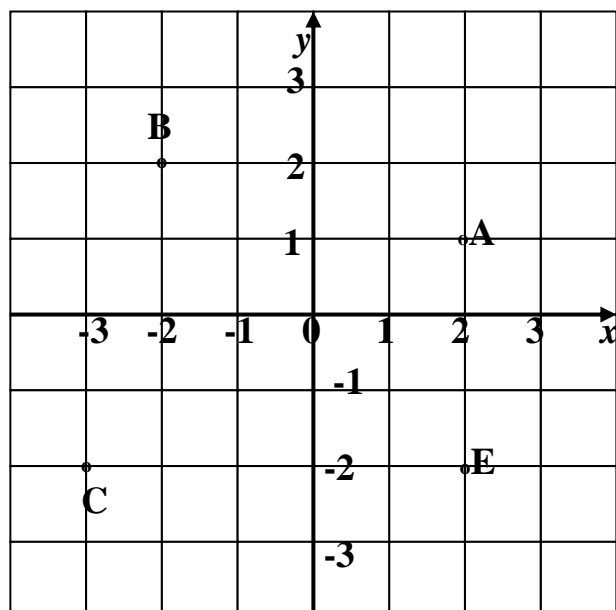
Point ...has coordinate (-2, 2)

Point C has coordinate (... , ..)

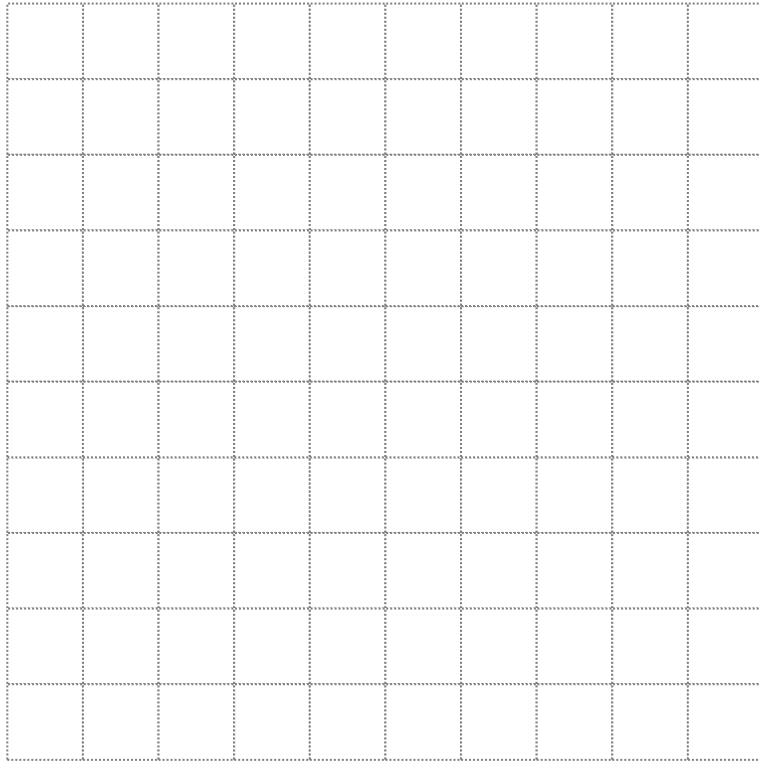
Point (0, 0) is called the

Join A to B and join B to C.
Now on the diagram complete the square ABCD.
Label D and give its coordinate.

Coordinate D is



16. Draw a net of a **2cm** cube.



End of Test

4.

$$\textcircled{d} \xrightarrow{+5} \boxed{d+5}$$

$$\textcircled{b} \xrightarrow{\times 2} \boxed{2b}$$

Complete the boxes or circles in each of the following

a. $\textcircled{6} \xrightarrow{+a} \boxed{}$

b. $\textcircled{a} \xrightarrow{\times 3} \boxed{}$

c. $\textcircled{p} \xrightarrow{+q} \boxed{}$

d. $\textcircled{} \xrightarrow{+y} \boxed{3y}$

e. $\textcircled{} \xrightarrow{\times b} \boxed{ab}$

f. $\textcircled{3a} \xrightarrow{-a} \boxed{}$

g. $\textcircled{4} \xrightarrow{\times} \boxed{12}$

h. $\textcircled{6a} \xrightarrow{+} \boxed{7a}$

i. $\textcircled{4} \xrightarrow{+} \boxed{12}$

j. $\textcircled{a} \xrightarrow{-} \boxed{a-6}$

5. Complete the boxes or circles in each of the following

a. $\textcircled{2} \xrightarrow{\text{Double and add 3}} \boxed{}$

b. $\textcircled{2} \xrightarrow{\text{Add 3 and double}} \boxed{}$

c. $\textcircled{} \xrightarrow{\text{Double and subtract 1}} \boxed{7}$

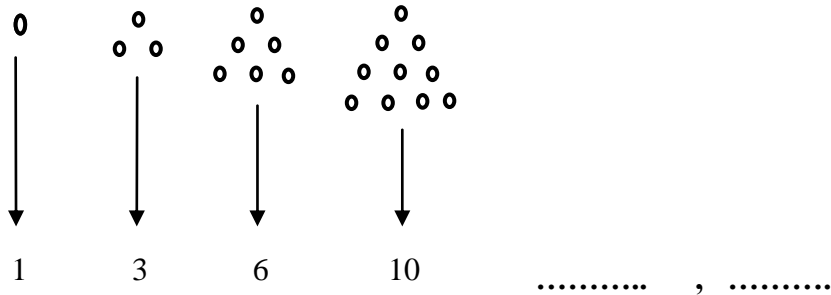
d. $\textcircled{} \xrightarrow{\text{Subtract 1 and double}} \boxed{6}$

e. $\textcircled{t} \xrightarrow{\text{Multiply by 5 and add 3}} \boxed{}$

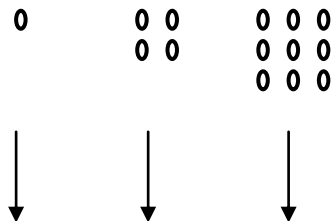
9. Complete the list of the first six odd whole numbers

1, 3,,,,

Complete the sequence of **triangular** numbers as far as the sixth one. The dots may help you.



Write down the numbers in the following sequence from the diagram below. Complete up to the sixth number.



.....,,,,,

What are these numbers called?

Answer =

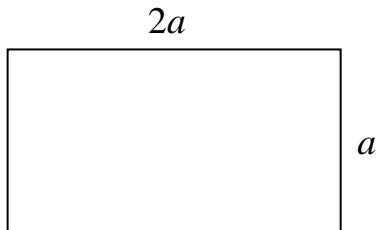
Complete the next three rows:

1	= 1	= 1 ²
1 + 3	= 4	= 2 ²
1 + 3 + 5	= 9	= 3 ²
.....	=.....	=.....
.....	=.....	=.....
.....	=.....	=.....

How many of the first odd numbers would you have to add together to give 144?

Answer

11.



Write down and simplify an expression for the perimeter of this rectangle

Perimeter =

The rectangle is twice as long as it is wide. The perimeter is 24cm. Calculate the width of the rectangle. Show all your working.

Width =

12. Solve each of the following equations. For full marks you must show all steps in the working.

a. $3x = 12$

$x = \dots\dots\dots$

b. $x + 5 = 11$

$x = \dots\dots\dots$

c. $x - 3 = 4$

$x = \dots\dots\dots$

d. $2x - 3 = 5$

$x = \dots\dots\dots$

e. $3(x - 2) = 21$

$x = \dots\dots\dots$

13. If $a = 2$, $b = 3$ and $c = 5$, find the value of each of the following.

i) $a + 7 = \dots\dots\dots$

v) $ac = \dots\dots\dots$

ii) $4b = \dots\dots\dots$

vi) $b^2 = \dots\dots\dots$

iii) $a + b = \dots\dots\dots$

vii) $4c - 6b = \dots\dots\dots$

iv) $c - a = \dots\dots\dots$

viii) $abc = \dots\dots\dots$