



11-12 YEARS | WEEK 01

Math-Geometry

1. Fun with Geometry

2. Lines of Symmetry

3. Lines of Symmetry

4. Perimeter

5. Word search

6. Match- Symmetry

7. Do as directed- Symmetry

8. Choose and fill

9. Identify and complete

10. Choose and tick

11. Basic geometrical ideas

12. Understanding of elementary shapes

13. Identify the shapes

14. Answer the following questions

15. Shapes

16. Shapes

17. Coordinating the coordinates

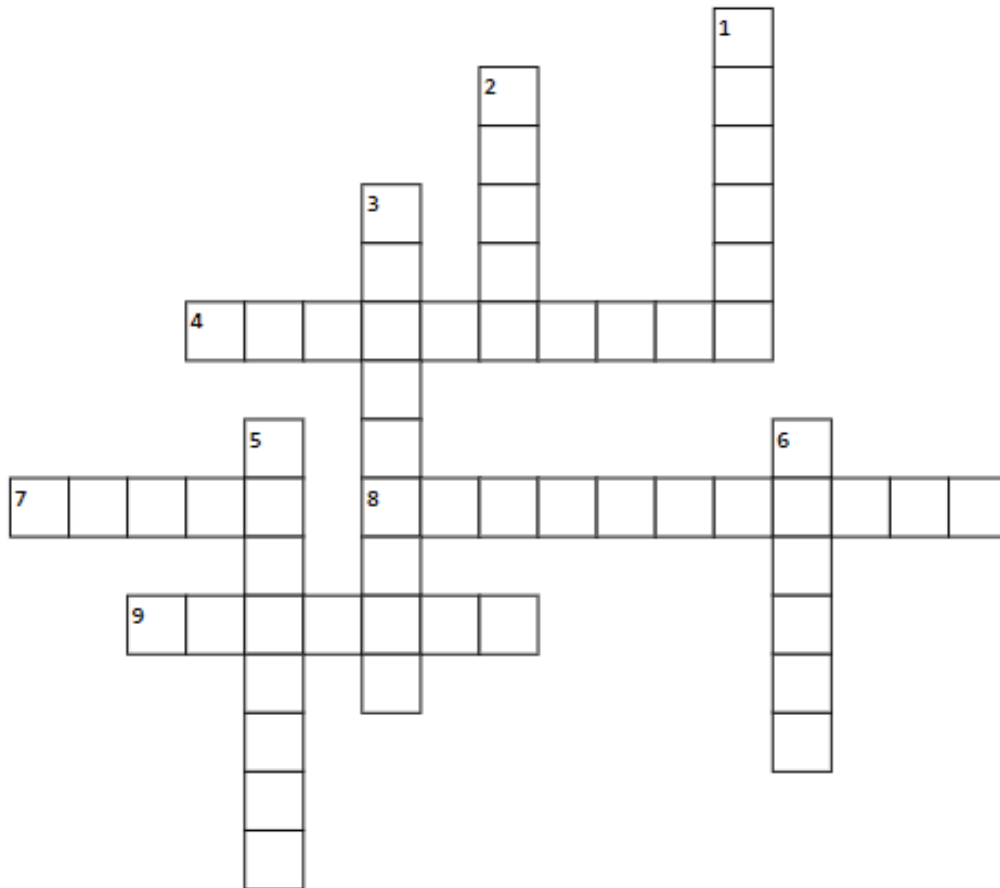
18. Coordinating the coordinates

19. Coordinating the coordinates

20. Coordinating the coordinates

Fun with Geometry

Solve this crossword using the definitions provided below



Across

4. the longest side of a right-angled triangle
7. an angle which measures 90 degree
8. triangle where all the lengths of the sides are equal
9. triangle has all side lengths of different measures

Down

1. an angle which measures greater than 90 degree
2. an angle which measures less than 90 degree
3. In a triangle where the lengths of two of the three sides are equal
5. an angle which measures 180 degree
6. an angle which measures greater than 180 and less than 360

Answers:

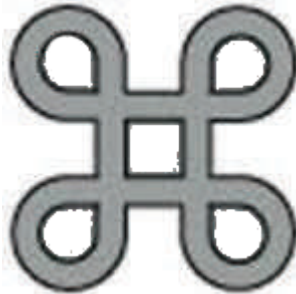
1. Obtuse	2. Acute	3. Isosceles	4. Hypotenuse
6. Reflex	7. Right	8. Equilateral	9. Scalene
		5. Straight	

Lines of Symmetry

Draw and find the lined of symmetry for each of the following shapes



1



2



3



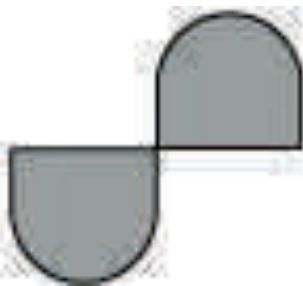
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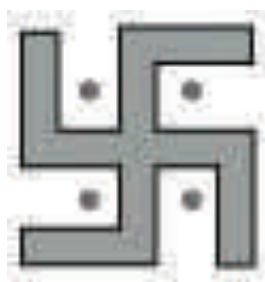
5



6



7



8

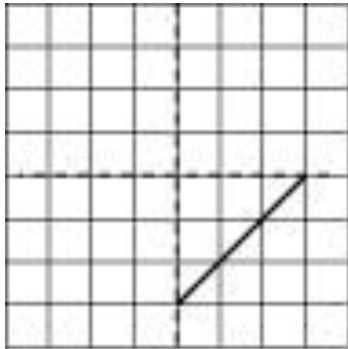


9

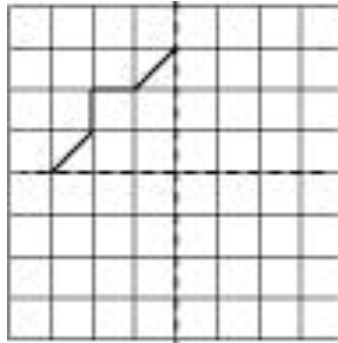
Answers
1. 4
2. 4
3. 4
4. 1
5. 6
6. 6
7. ON

Lines of Symmetry

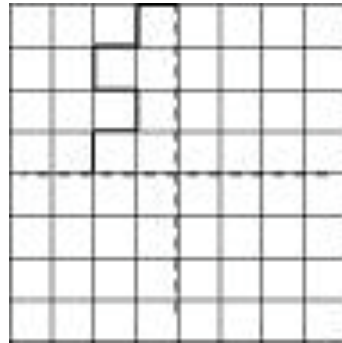
Complete each one of them such that the resulting figure has two dotted lines as two lines of symmetry.



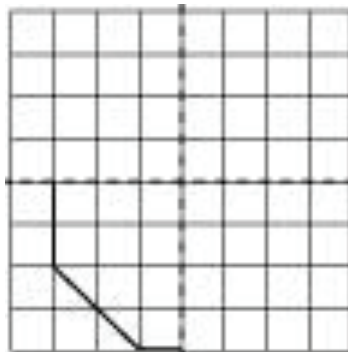
a



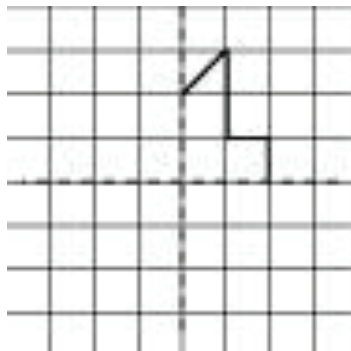
b



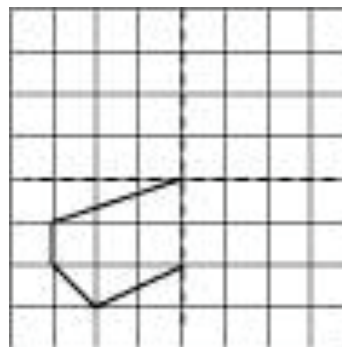
c



d



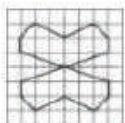
e



f

---- Fold Here ----

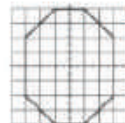
Answer



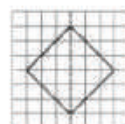
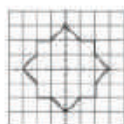
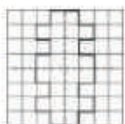
(a)



(b)

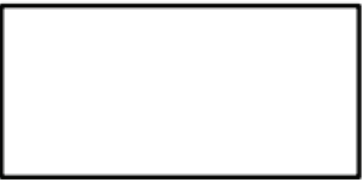
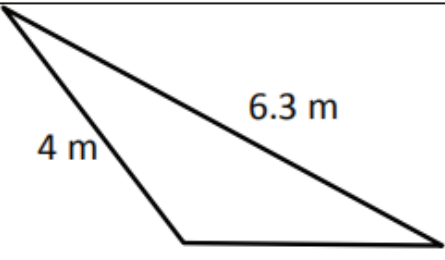
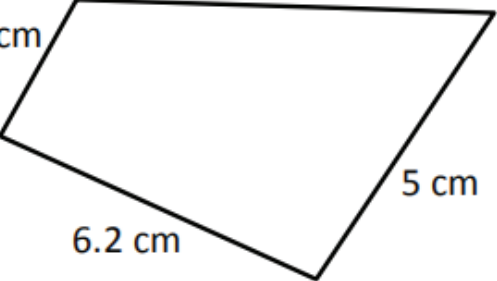
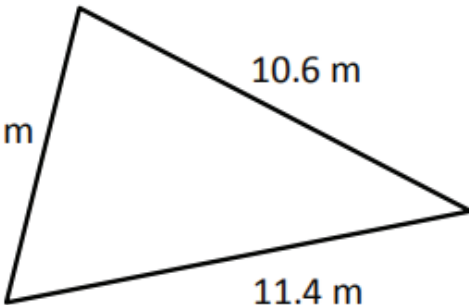
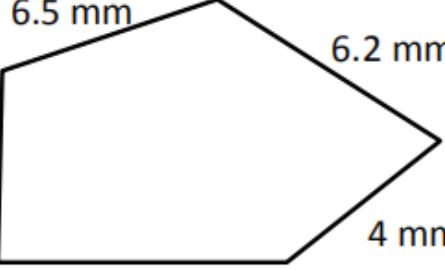



(c)



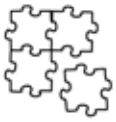
Perimeter

Find the perimeter of the following figures. Perimeter = Sum of all sides of a figure.

<p>1)</p>  <p>Perimeter = _____ cm</p>	<p>2)</p>  <p>Perimeter = _____ m</p>
<p>3)</p>  <p>Perimeter = _____ cm</p>	<p>4)</p>  <p>Perimeter = _____ m</p>
<p>5)</p>  <p>Perimeter = _____ mm</p>	<p>6)</p>  <p>Perimeter = _____ cm</p>

Answers

1) 20 cm 2) 13.8 m 3) 21.3 cm
 4) 29.2 m 5) 28.8 mm 6) 21 cm



Word search



Complete the following sentences and also find these words in the grid.

- A line segment corresponds to the _____ distance between two points.
- Two distinct lines meeting at a point are called _____ lines.
- Two lines in a plane are said to be _____ if they do not meet.
- A _____ is a portion of line starting at a point and going in one direction endlessly.
- A curve is said to be _____ if its ends are joined.
- Any two sides with a common end point are _____ sides.
- The meeting point of a pair of sides is called a _____.
- An _____ is made up of two rays starting from a common starting / initial point.
- A _____ of a circle is a line segment joining any two points on the circle.
- A _____ is a chord passing through the centre of the circle.

i	q	t	r	a	y	s	n	k	c	j	g
q	a	n	g	l	e	x	a	a	n	t	b
m	q	p	k	l	e	l	l	a	r	a	p
p	r	s	h	o	r	t	e	s	t	z	q
g	d	i	a	m	e	t	e	r	h	u	h
i	n	t	e	r	s	e	c	t	i	n	g
q	f	j	e	o	n	z	t	y	c	r	i
c	l	o	s	e	d	a	m	x	h	j	p
z	v	a	x	e	t	r	e	v	o	s	m
r	j	i	b	t	z	t	q	s	r	q	p
b	b	r	v	f	o	q	t	l	d	u	w
a	d	j	a	c	e	n	t	x	w	d	s

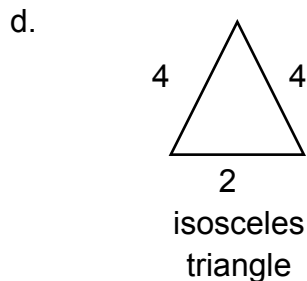
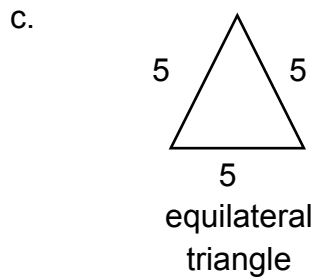
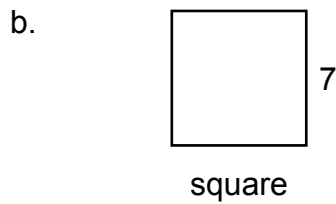
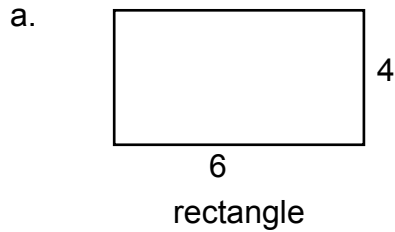


Match



A. Match the following:

Shapes



Perimeter

i. 10

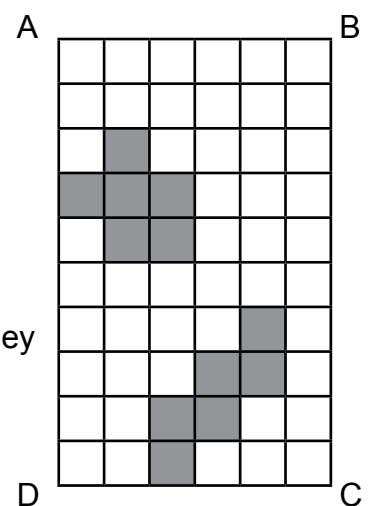
ii. 15

iii. 28

iv. 20

B. If each square is of unit length, then

- What is the perimeter of the rectangle ABCD?
- What is the area of the rectangle ABCD?
- Divide this rectangle into ten parts of equal area by shading squares. (Two parts of equal area are shown here)
- Find the perimeter of each part which you have divided. Are they all equal?





Do as directed



A. Match the following:

Shape	No. of lines of symmetry
a. Square	i. 6
b. Isosceles triangle	ii. 5
c. Kite	iii. 4
d. Equilateral triangle	iv. 3
e. Rectangle	v. 2
f. Regular hexagon	vi. 1
g. Scalene triangle	vii. 0

B. Write the number of lines of symmetry in the following letters:

- a. **A**
- b. **G**
- c. **H**
- d. **O**
- e. **K**
- f. **X**



Choose and fill



What do the following things in our surrounding represent? Use the help box to write the answer.

Help box

a point, a ray, a line segment, a plane, parallel lines,
intersecting lines

Tip of a pencil _____

Edge of a ruler _____

Corner of a book _____

Light coming out of torch _____

Flat surface of a table _____

Opposite edges of a ruler _____

Adjacent edges of a ruler _____



Identify and complete



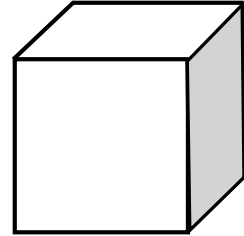
Fill in the name and number of faces, edges and vertices for each shape given below.

Name :

Faces :

Vertices :

Edges:

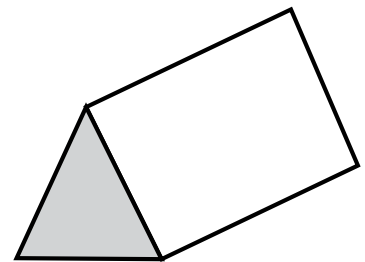


Name :

Faces :

Vertices :

Edges:

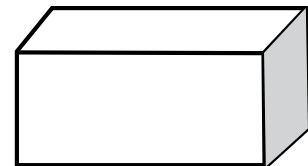


Name :

Faces :

Vertices :

Edges:

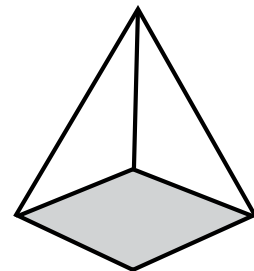


Name :

Faces :

Vertices :

Edges:



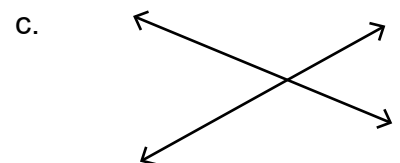
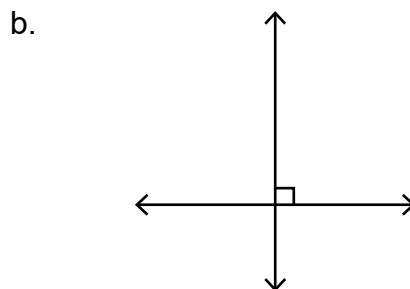
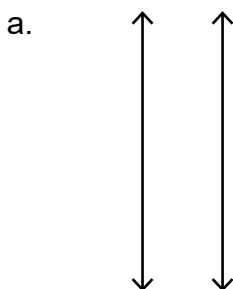


Choose and tick



Choose the correct option from the following. Tick the correct option.

- A triangle is a closed planar shape with
 - 2 sides
 - 4 sides
 - 3 sides
 - 5 sides
- A closed planar shape with 5 sides is called a
 - pentagon
 - hexagon
 - square
 - heptagon
- A closed planar shape with 4 sides is called a
 - segment
 - hexagon
 - quadrilateral
 - heptagon
- A line segment is defined by
 - 1 point
 - 3 points
 - 2 points
 - 4 points
- An equilateral triangle has
 - only 2 equal sides
 - all 3 sides equal
 - no equal sides
 - one right angle
- Which of the statements below best describes a square?
 - A square has 4 equal sides and 4 right angles.
 - A square has 4 equal sides.
 - A square has 4 right angles.
 - 2 pairs of parallel sides.
- Which pair of lines are parallel?

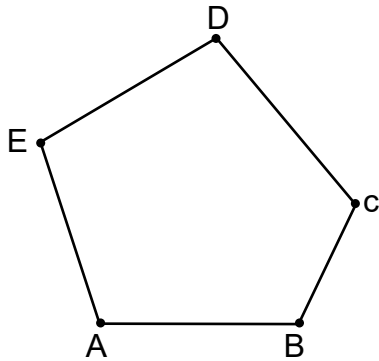




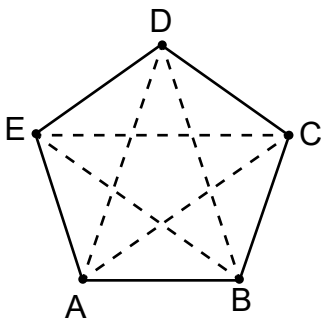
Basic geometrical ideas



1. How many lines can pass through two given points? _____
2. Two intersecting lines intersect at _____
3. How many vertices are there in the following figure



4. How many angles are there in a triangle? _____
5. How many angles are there in a quadrilateral? _____
6. How many diagonals are there in the following figure?



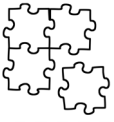
7. Which of the following statements is false?
 - a. Every chord of a circle is also a diameter.
 - b. The centre of a circle is always in its interior.
 - c. Two diameter of a circle will necessarily intersect.
 - d. Every diameter of a circle is also a chord.



Understanding of elementary shapes



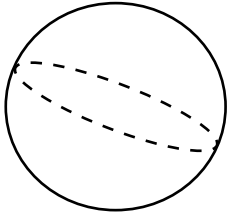
1. The angle measure for one-fourth revolution is
 - a. 360°
 - b. 180°
 - c. 90°
 - d. None of these
2. What will be the measure angle when the hour hand of a clock turns from 3 to 9?
 - a. 360°
 - b. 180°
 - c. 90°
 - d. None of these
3. What will be the measure angle when the hour hand of a clock turns from 2 to 11?
 - a. 210°
 - b. 270°
 - c. 180°
 - d. None of these
4. What part of a revolution have you turned through if you stand facing east and turn clockwise to face west?
 - a. $\frac{1}{2}$
 - b. $\frac{1}{4}$
 - c. $\frac{3}{4}$
 - d. None of these
5. What is the number of right angles turned through by the hour hand of a clock when it goes from 12 to 3?
 - a. 4
 - b. 3
 - c. 2
 - d. 1
6. How many right angles do you make if you start facing east and turn clockwise to south?
 - a. 4
 - b. 3
 - c. 1
 - d. 2



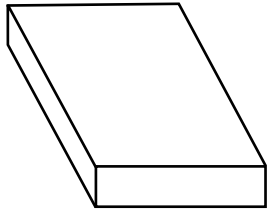
Identify the shapes



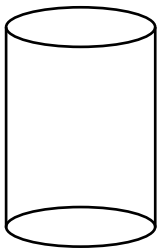
1.



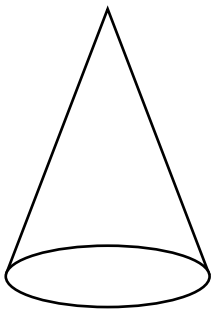
2.



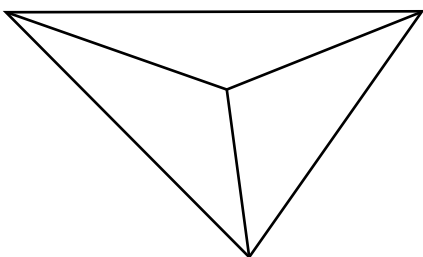
3.



4.



5.

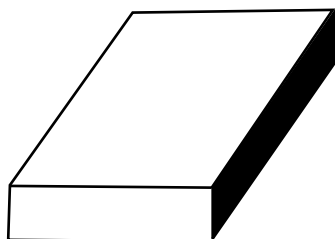




Using images, answer the following questions

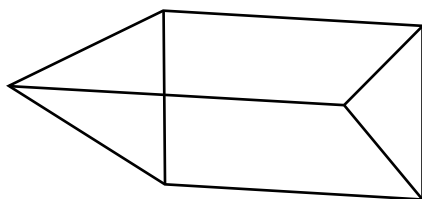


1.



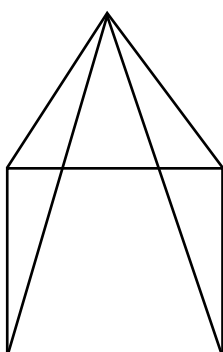
- The number of faces of the shape is _____
- The number of edges of the shape is _____
- The number of vertices of the shape is _____

2.



- The number of faces of the shape is _____
- The number of edges of the shape is _____
- The number of vertices of the shape is _____

3.



- The number of faces of the shape is _____
- The number of edges of the shape is _____
- The number of vertices of the shape is _____



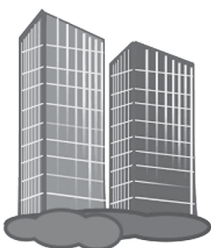
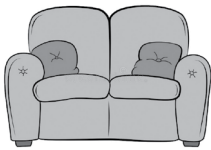
Shapes



Identify different geometrical shapes in given pictures:

Object

Shape





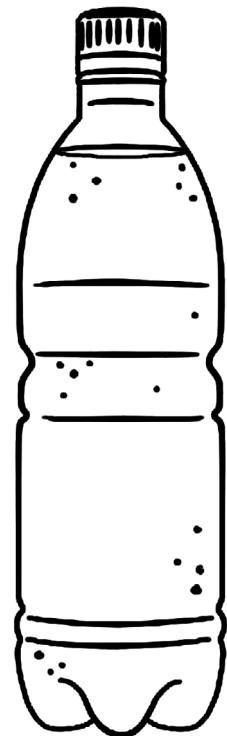
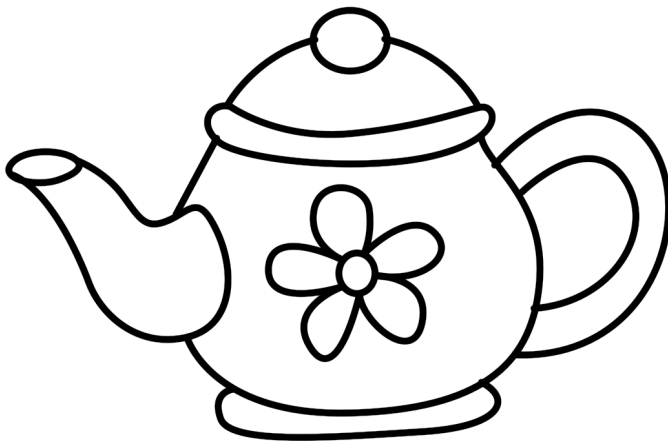
Shapes



Use the below given templates to create colorful cards. Cut the templates and color them. Now draw any 4 items which you see on daily basis on the cards considering any 4 different shapes in your mind. Write the name of the shape on the back of the card.

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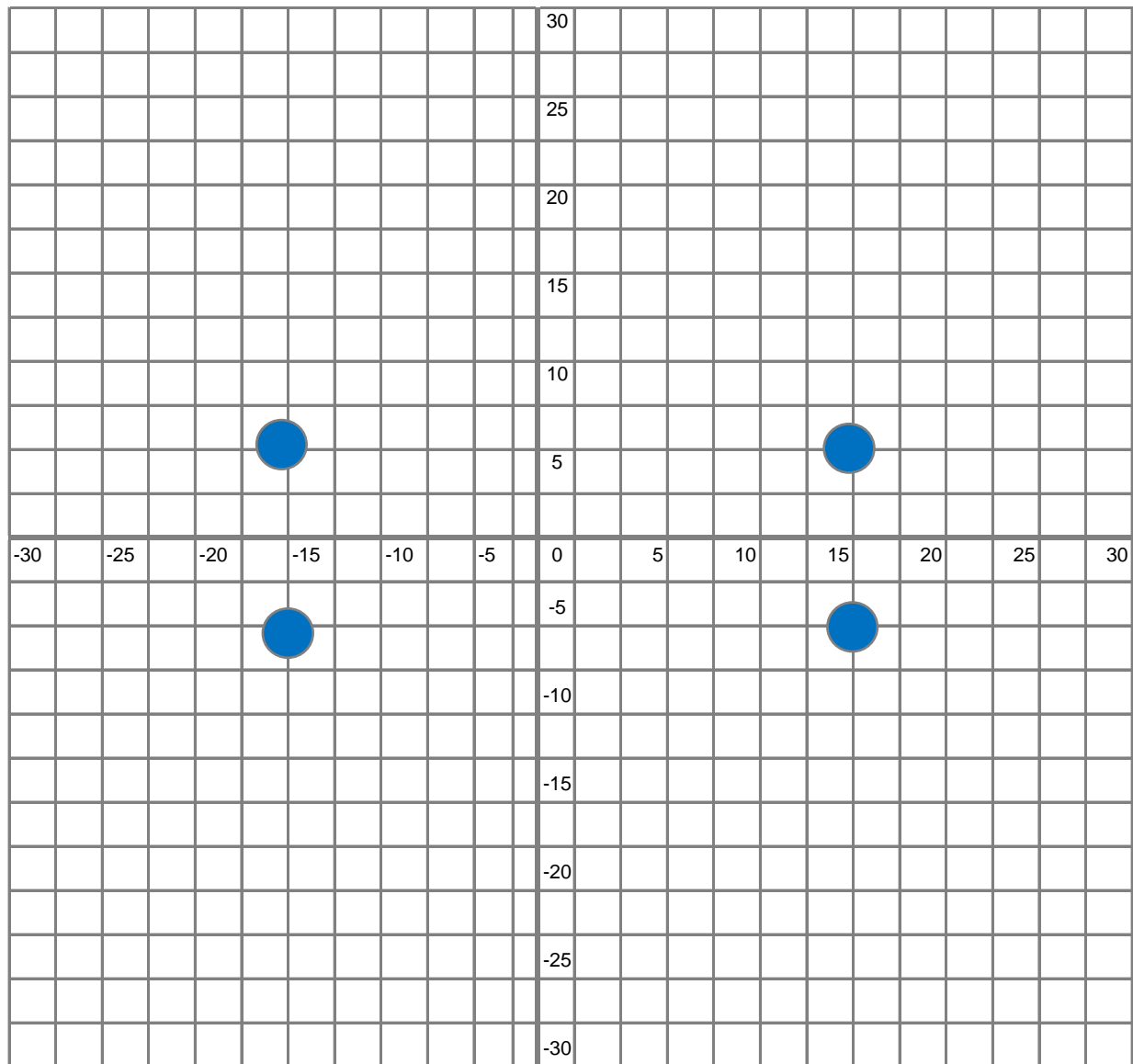
But before you make the cards observe the below given images carefully and color them in your favourite colors.





COORDINATING THE COORDINATES

Coordinates uniquely define a position by its horizontal and vertical directions. Can you draw the shapes given below in their correct places specified by coordinates? One has been completed for you.

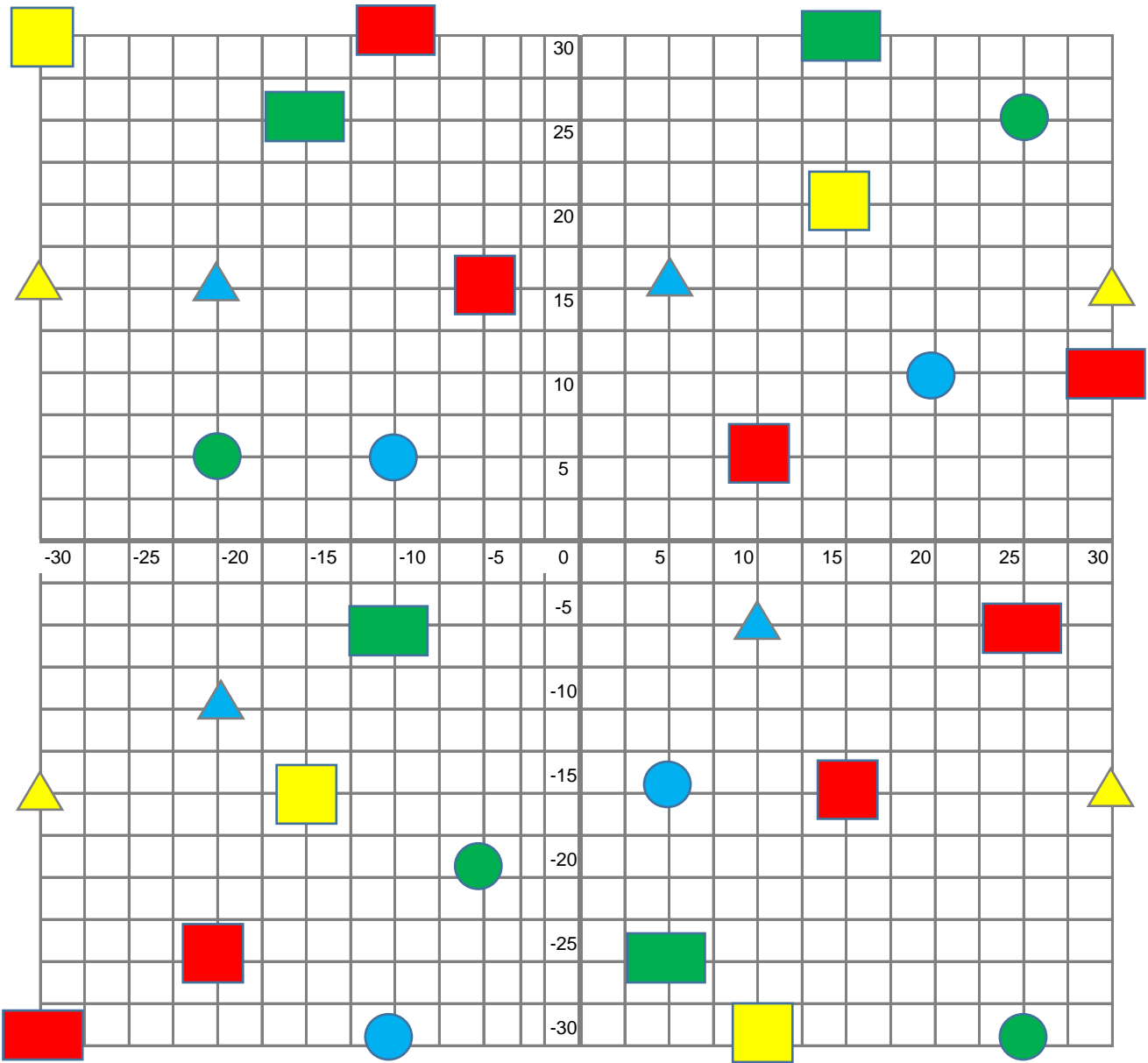


YELLOW TRIANGLE	(30 , 15)	(30 , -15)	(-30 , 15)	(-30 , -15)
BLUE TRIANGLE	(10 , 25)	(10 , -25)	(-10 , 25)	(-10 , -25)
RED SQUARE	(5 , 20)	(5 , -20)	(-5 , 20)	(-5 , -20)
GREEN CIRCLE	(20 , 30)	(20 , -30)	(-20 , 30)	(-20 , -30)
BLUE CIRCLE	(15 , 5)	(15 , -5)	(-15 , 5)	(-15 , -5)
RED RECTANGLE	(25 , 15)	(25 , -15)	(-25 , 15)	(-25 , -15)
GREEN RECTANGLE	(0 , 10)	(0 , -10)	(-10 , 10)	(-10 , -10)
YELLOW SQUARE	(15 , 0)	(15 , -15)	(-15 , 0)	(-15 , -15)



COORDINATING THE COORDINATES

Coordinates uniquely define a position by its horizontal and vertical directions. Can you write the coordinates for the shapes given below in the coordinate plane?



- YELLOW TRIANGLE
- BLUE TRIANGLE
- RED SQUARE
- GREEN CIRCLE
- BLUE CIRCLE
- RED RECTANGLE
- GREEN RECTANGLE
- YELLOW SQUARE

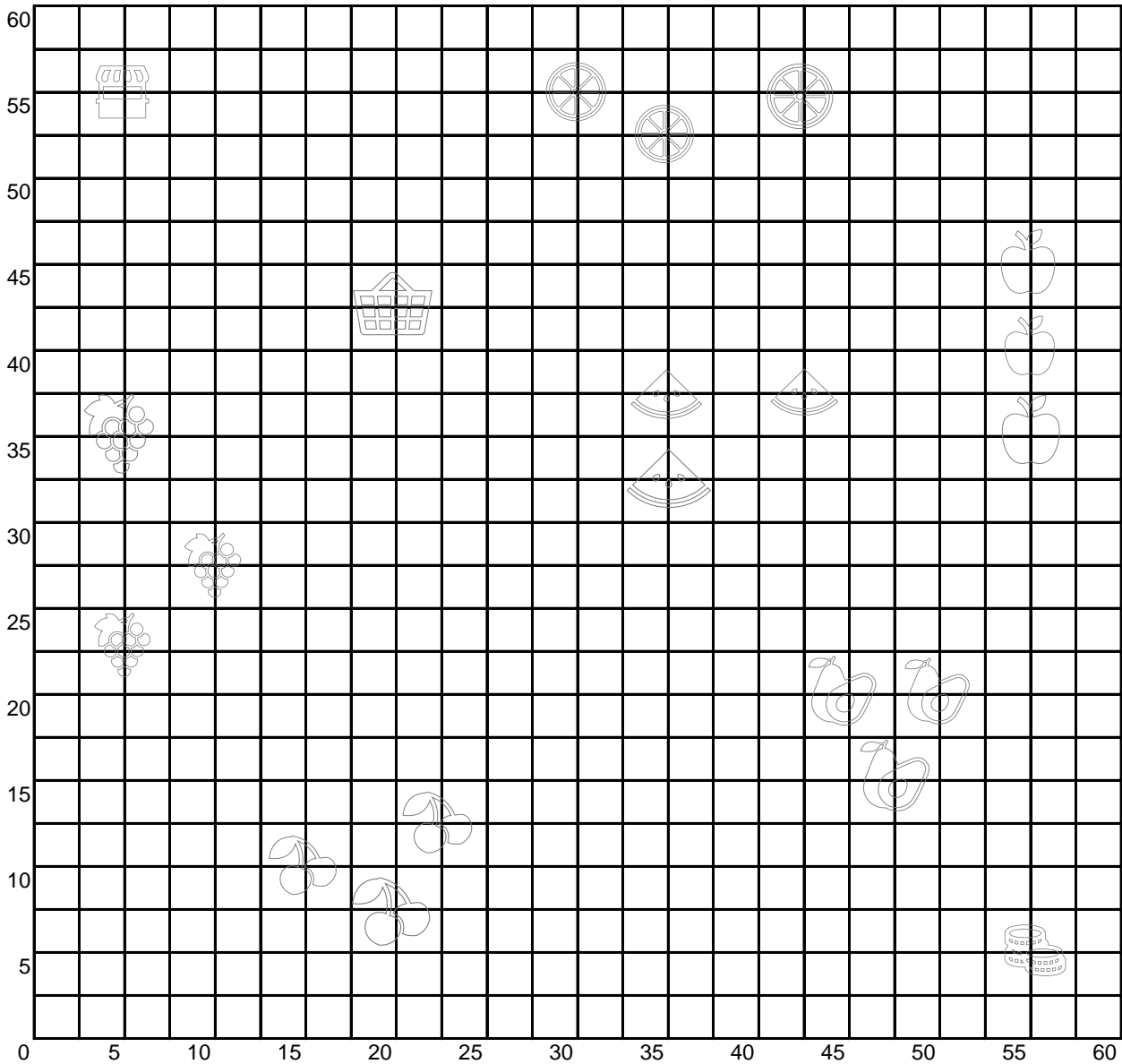
(30 , 15)	(30 , -15)	(-30 , 15)	(-30 , -15)



COORDINATING THE COORDINATES

Coordinates uniquely define a position by its horizontal and vertical directions. Can you find the coordinates of the given shapes on the map? Draw the path in sequence. One has been completed for you.

Start Here



Fruit shop

(5 , 55)

Watermelons

(,) (,) (,)

Fruit basket

(,)

Oranges

(,) (,) (,)

Grapes

(,) (,) (,)

Apples

(,) (,) (,)

Cherries

(,) (,) (,)

Avocados

(,) (,) (,)

Count coins & pay

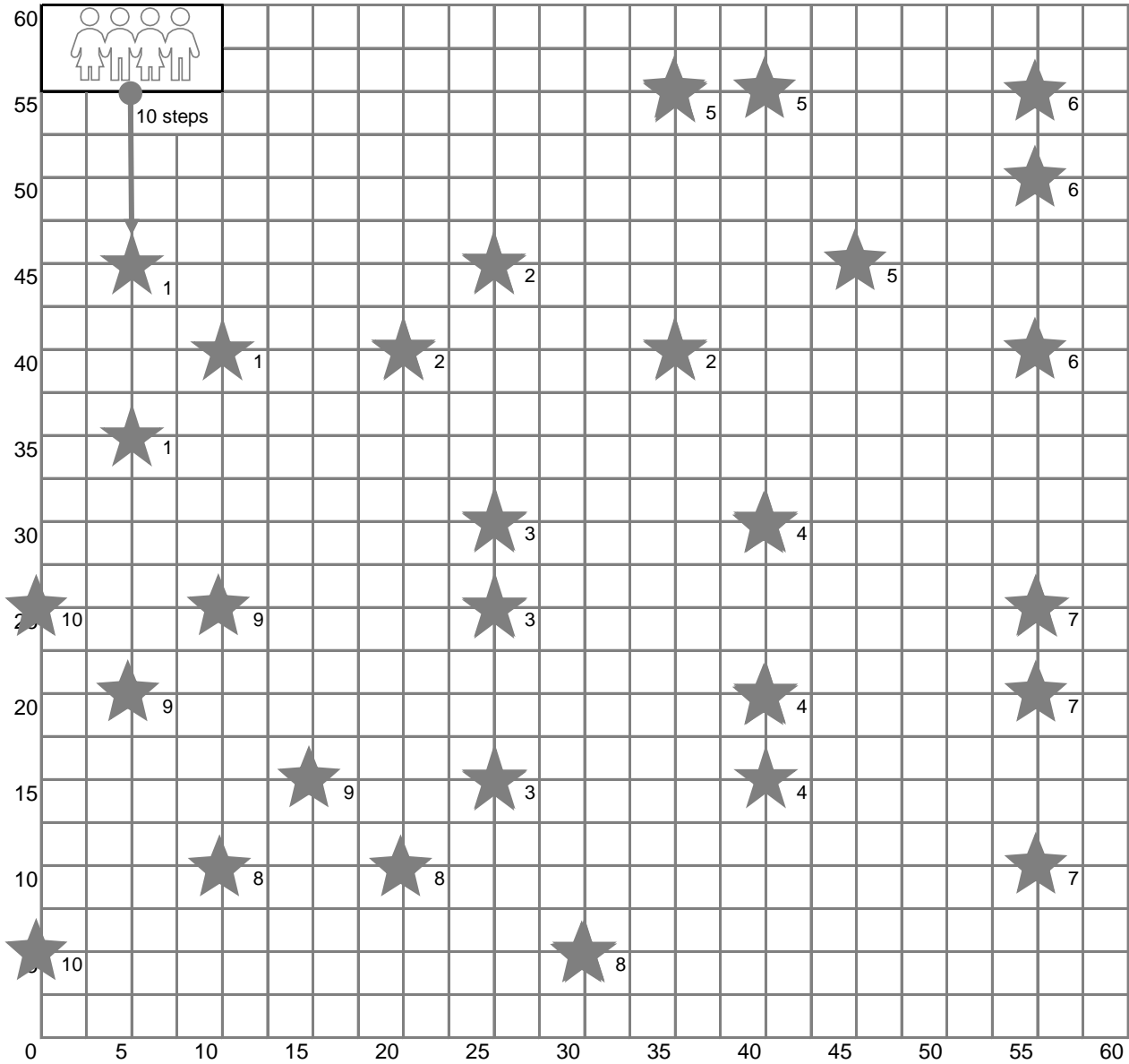
(,)



COORDINATING THE COORDINATES

Your friends are visiting you for ten days, and you made a plan to take them around your town. Can you find the coordinates of the given places to see on the map shown by the stars? Draw the path in sequence. Measure the total distance covered. One has been completed for you.

Start Here



1	(5,45)	(5,35)	(10,40)	6	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	7	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	8	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	9	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	10	<input type="text"/>	<input type="text"/>	<input type="text"/>

Total distance covered