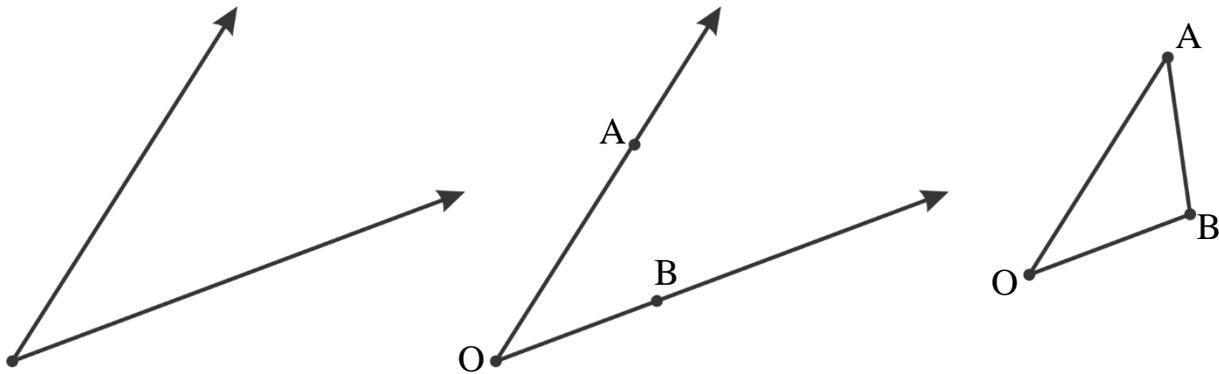


$4 \cdot 12$	$96 : 8$	$52 : 2$
$+12$	$\cdot 30$	$+24$
$\cdot 3$	-300	$: 25$
$: 9$	$: 4$	$\cdot 36$
?	?	?

Triangles.

An angle is form by two rays with common end point. If we mark one point on each side of the angle and connect them, we will get a triangle. A triangle is closed shape with three sides and three vertices. It is a simplest polygon.



There are several types of triangles based on their angles: acute triangle, obtuse triangle, and right triangle.

Acute triangle has all angles less then right angle.

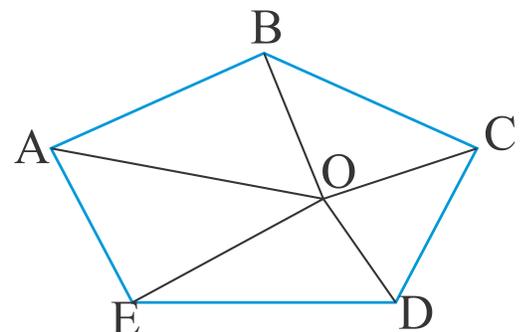
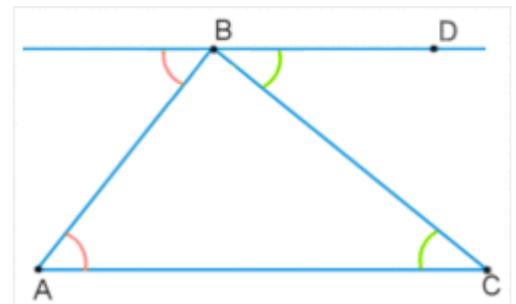
Obtuse triangle has one obtuse angle.

Right triangle has one right angle.

Can a triangle has two right angles? Two obtuse angles?

The sum of the angles of a triangle is a straight angle.

The sum of the internal anglers of any polygon is $(n - 2) \times 180$.



$$n \times 180 - 360 = (n - 2) \times 180$$

Triangles can be equilateral, isosceles.

The sum of the length of two sides of a triangle has to be greater than the third side.

Draw different types of triangles.

Review of sets.

1. A set is a collection of well defined objects. We can create a set just by listing all of its elements. For example, set A contains 2, 5, v , n , \bullet , \diamond . We denote, $A = \{2, 5, v, n, \bullet, \diamond\}$. The second way to create a set is to describe a rule, which is applicable to all elements in the set. For example: set N is the set of all natural numbers. So we know that set B contains all natural numbers, $N = \{1, 2, 3, \dots\}$.

2. If B is a set and x is one of the objects of B , this is denoted $x \in B$, and is read as "x belongs to B", or "x is an element of B". If y is not a member of B then this is written as $y \notin B$, and is read as "y does not belong to B".

3. $C = \{2, 5\}$, $C \subset A$

Each element of the set C is also an element of set A, so C is subset of A.

C is also a subset of N, since 2 and 5 are natural numbers. We can write $C \subset N$.

The empty set is a subset of every set and every set is a subset of itself:

- $\emptyset \subset A$.
- $A \subset A$.

4. A set containing elements which are common elements of two sets is called intersection of the two sets. $C = A \cap B$.

5. Two sets can be "added" together. The *union* of D and M , denoted by $D \cup M$, is the set of all things that are members of either D or M .

6. We can divide set into two or more subsets in such a way that each element of the set will be in only one of these subsets, intersection of any two subsets will be an empty set. The set of non-intersecting subsets is called partition of the set. For example, the set of natural numbers N can be partitioned into two sets, of even and odd numbers. Each natural number is either even or odd.

7. $M = \{x | x > 5\}$, $K = \{x | x < 20\}$

