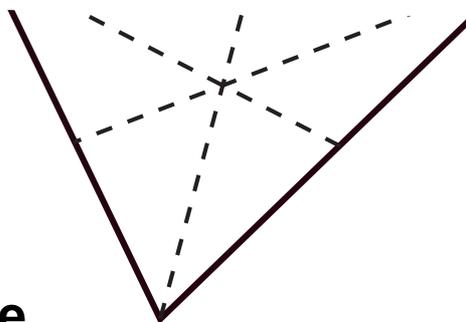


## Activity 12

# Centroid of a triangle



### Objectives

To illustrate that the medians of a triangle concur at a point (called the centroid), which always lies inside the triangle.

### Pre-requisite knowledge

Familiarity with Activity 1A.

### Materials required

Coloured paper, pencil, a pair of scissors, gum.

### Procedure

1. From a sheet of paper, cut out three types of triangle: acute-angled triangle, right-angled triangle and obtuse-angled triangle.
2. For an acute-angled triangle, find the mid-points of the sides by bringing the corresponding two vertices together. Make three folds such that each joins a vertex to the mid-point of the opposite side. [Fig 12 (a)]
3. Repeat the same activity for a right-angled triangle and an obtuse-angled triangle. [Fig 12 (b) and Fig 12 (c)]

### Observations

The students observe that the three medians of a triangle concur. They also observe that the centroid of an acute, obtuse or right-angled triangle always lies inside the triangle.

### Learning Outcomes

1. The students learn that the medians of a triangle are concurrent and cannot form a triangle.
2. The students will learn that the centroid is the point of the trisection of the median of a triangle.

### Remark

The teacher may encourage the student to provide a proof of concurrence and of the observation about the location of the centroid.

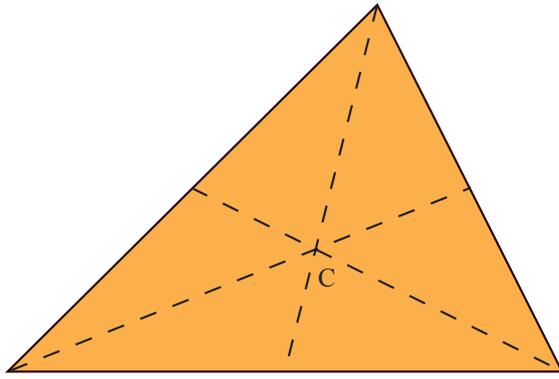


Fig 12 (a)

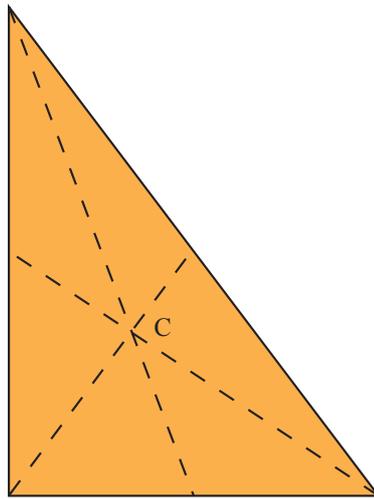


Fig 12 (b)

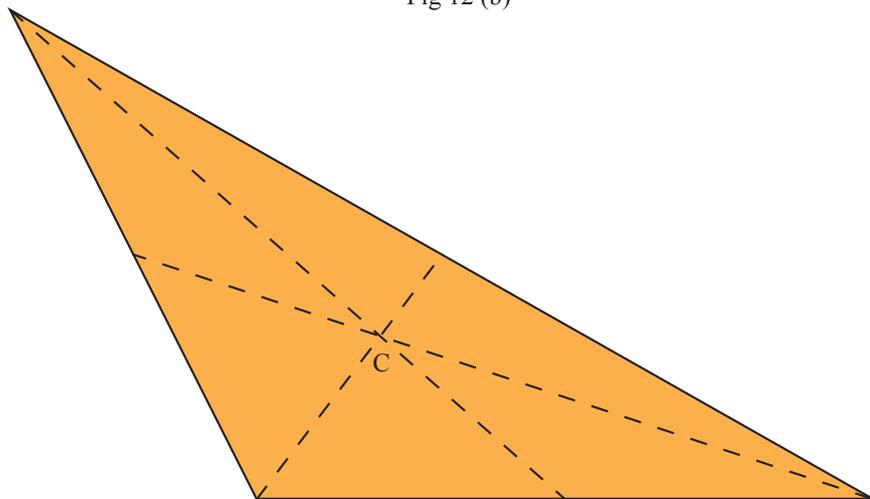


Fig 12 (c)