

Homework: Triangles

In triangle DEF,  $\angle D = 35^\circ$  and  $\angle E = 75^\circ$ . Find the measure of an exterior angle at F.

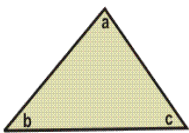
Measure of an exterior angle of a triangle is equal to the sum of the measures of the two non-adjacent interior angles.

Exterior angle at F =  $\angle D + \angle E = 35 + 75 = 110^\circ$

**Answer:**  $110^\circ$

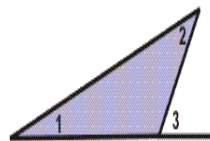
1. In triangle DEF,  $\angle D = 40^\circ$  and  $\angle F = 120^\circ$ . Find the measure of an exterior angle at E.
2. The angles of an isosceles triangle are in the ratio of 1:4:4. Find the measure of any of the base angle of the triangle.
3. The vertex angle of an isosceles triangle measures  $90^\circ$ . Find the measure of a base angle.
4. In triangle ABC,  $\angle A = 50^\circ$  and  $\angle B = 50^\circ$ . What type of triangle is triangle ABC?
5. In triangle DEF,  $\angle D = 80^\circ$  and  $\angle F = 70^\circ$ . Find the measure of an exterior angle at E.
6. The angles of a triangle are in the ratio of 2:3:4. Find the measure of largest angle of the triangle.
7. What are the measures of all angles of an isosceles right triangle?
8. In triangle ABC,  $\angle A = 70^\circ$  and  $\angle B = 50^\circ$ . What type of triangle is triangle ABC?

9.



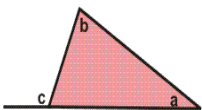
Find the value of all angles, if  $\angle a : \angle b : \angle c = 1:1:1$ .

10.



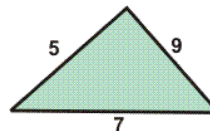
Find the value of  $x$ , if  $\angle 1 = (x+16)$ ,  $\angle 2 = (x-10)$  &  $\angle 3 = (3x-10)$ .

11.



Find the measure of  $\angle c$ , if  $\angle a = 60^\circ$  &  $\angle b = 50^\circ$  in the given diagram.

12.



Using Heron's formula, find the area of the triangle, to the nearest tenth.