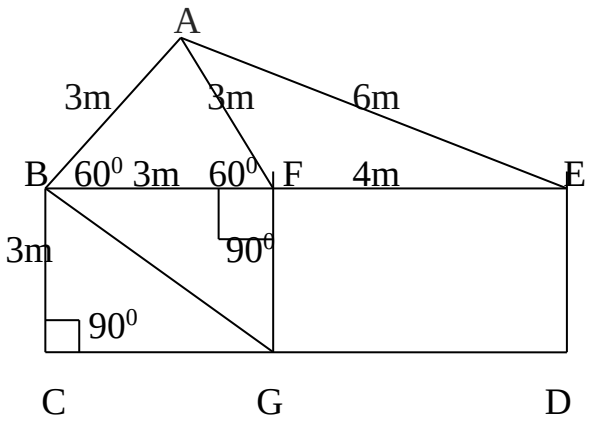
EXERCISE – 12B

Q-4. Give an example of each category from the given figure –

a. An equilateral triangle = triangle ABF
b. A scalene triangle = triangle AFE & triangle ABE
c. An acute – angled triangle = triangle ABF
d. A right angled triangle = triangle BCG & triangle BFG
e. An obtuse angled triangle = triangle AFE
f. An isosceles triangle = triangle BCG & triangle BFG



Q-6. The angles of triangle ABC are in the ratio 1 : 2 ; 3. Find the magnitude of each angle .

Sol : Ratio of angles = 1 : 2 : 3

= 1 + 2 + 3 = 6

Sum of all angles of a triangle = 180^0

So 1st angle ($\angle A$) = $\frac{1 \times 180}{6}$ 30 = 30^0

2nd angle ($\angle B$) = $\frac{2 \times 180}{6}$ 30 = 60^0

3rd angle ($\angle C$) = $\frac{3 \times 180}{6}$ 30 = 90^0

Q-7. Triangle PQR is a right angled triangle , right angled at R . RS $\perp$ PQ and angle Q = 35^0 . Find the magnitude of angle PRS , angle QRS and angle RPS.

Sol : In triangle RSQ = $\angle R + \angle S + \angle Q = 180^0$ (by angle sum property)

$\angle R + 90^0 + 35^0 = 180^0$

$\angle R + 125^0 = 180^0$

$\angle R = 180^0 - 125^0 = 55^0$

$\Rightarrow \angle QRS = 55^0$

In triangle RSP = $\angle R + \angle S + \angle P = 180^0$ (by angle sum property)

$35^0 + 90^0 + \angle P = 180^0$

$\angle P = 180^0 - 125^0 = 55^0$

$\Rightarrow \angle RPS = 55^0$