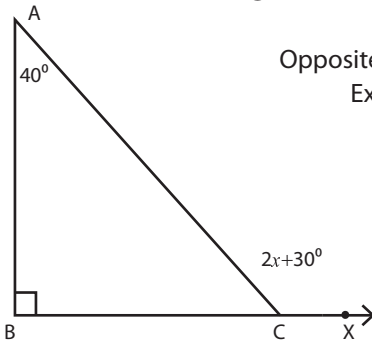
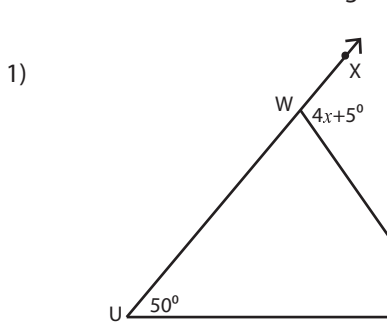


The measure of an exterior angle of a triangle is equal to sum of the measures of opposite interior angles.

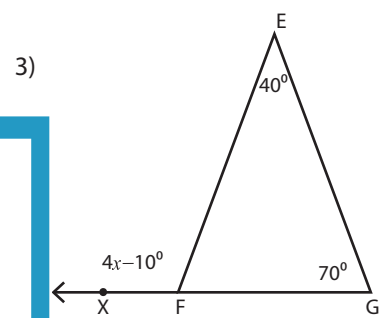
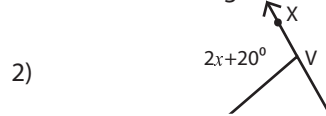


Exterior angle : $\angle ACX$
 Opposite interior angles : $\angle A$ and $\angle B$
 Exterior angle = Sum of opposite interior angles
 $\angle ACX = \angle A + \angle B = 40^\circ + 90^\circ = 130^\circ$
 $\angle ACX = 2x + 30^\circ$
 $2x + 30^\circ = 130^\circ$
 $2x = 130^\circ - 30^\circ$
 $2x = 100^\circ$
 $x = \frac{100^\circ}{2} = 50^\circ$

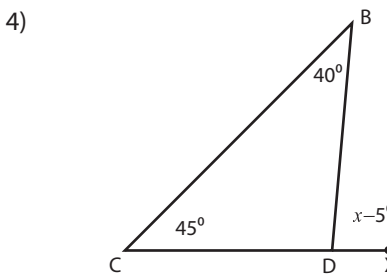
Find the unknown exterior angle and the value of x for each triangle.



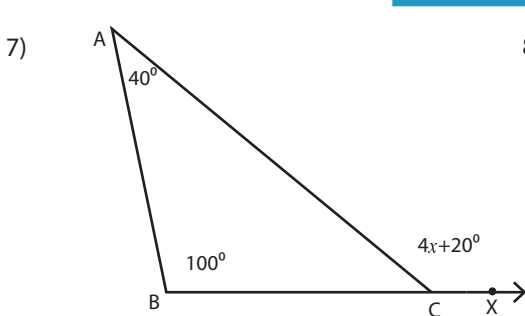
$\angle VWX = \underline{\hspace{2cm}}$; $x = \underline{\hspace{2cm}}$



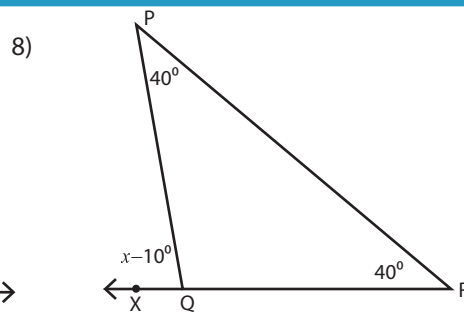
$\angle EFX = \underline{\hspace{2cm}}$; $x = \underline{\hspace{2cm}}$



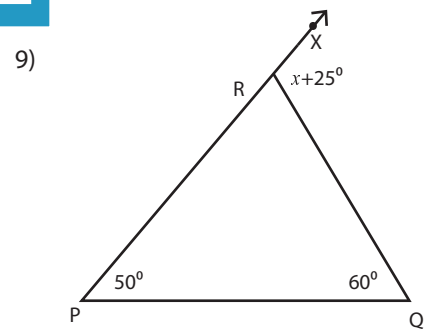
$\angle BDX = \underline{\hspace{2cm}}$; $x = \underline{\hspace{2cm}}$



$\angle ACX = \underline{\hspace{2cm}}$; $x = \underline{\hspace{2cm}}$



$\angle PQX = \underline{\hspace{2cm}}$; $x = \underline{\hspace{2cm}}$



$\angle QRX = \underline{\hspace{2cm}}$; $x = \underline{\hspace{2cm}}$

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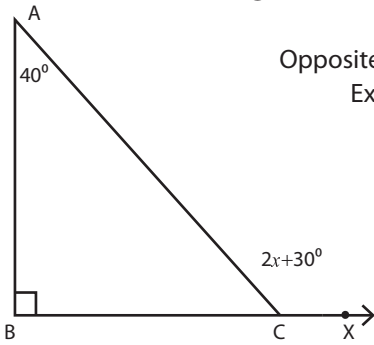
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Triangle - Exterior Angle

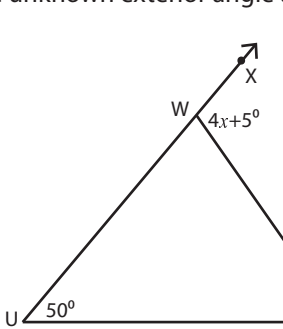
The measure of an exterior angle of a triangle is equal to sum of the measures of opposite interior angles.



Exterior angle : $\angle ACX$
 Opposite interior angles : $\angle A$ and $\angle B$
 Exterior angle = Sum of opposite interior angles
 $\angle ACX = \angle A + \angle B = 40^\circ + 90^\circ = 130^\circ$
 $\angle ACX = 2x + 30^\circ$
 $2x + 30^\circ = 130^\circ$
 $2x = 130^\circ - 30^\circ$
 $2x = 100^\circ$
 $x = \frac{100^\circ}{2} = 50^\circ$

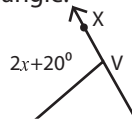
Find the unknown exterior angle and the value of x for each triangle.

1)

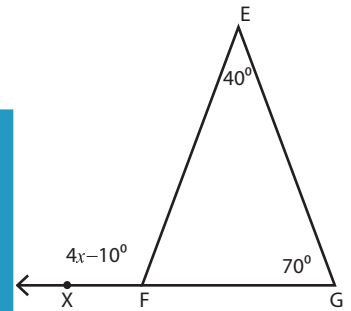


$\angle VWX = 105^\circ$; $x =$ _____

2)

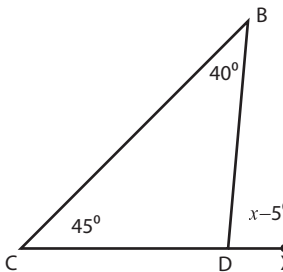


3)



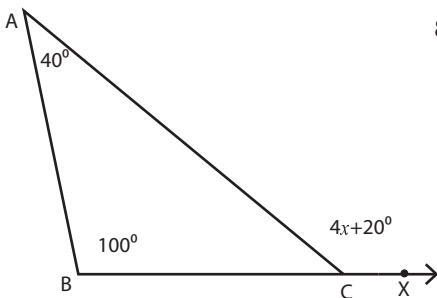
$\angle EFX = 110^\circ$; $x = 30^\circ$

4)



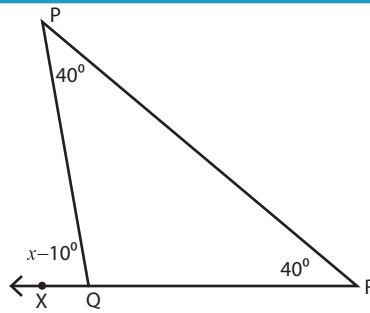
$\angle BDX = 85^\circ$; $x =$ _____

7)



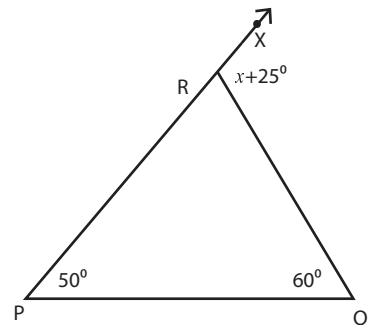
$\angle ACX = 140^\circ$; $x = 30^\circ$

8)



$\angle PQX = 80^\circ$; $x = 90^\circ$

9)



$\angle QRX = 110^\circ$; $x = 85^\circ$

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