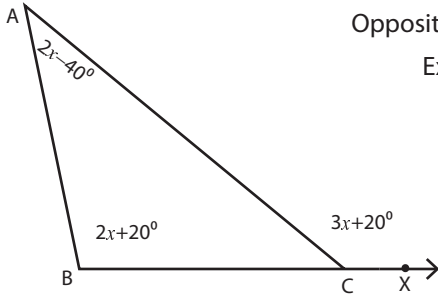
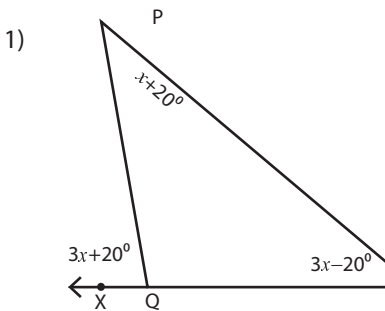


The measure of an exterior angle of a triangle is equal to sum of the measures of opposite interior angles.

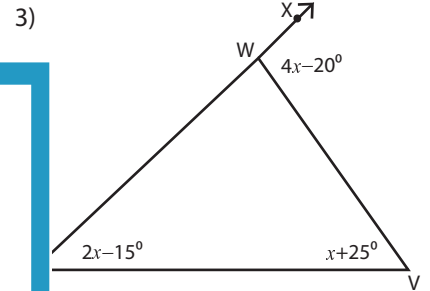


Exterior angle : $\angle ACX$
 Opposite interior angles : $\angle A$ and $\angle B$
 Exterior angle = Sum of opposite interior angles
 $\angle ACX = \angle A + \angle B$
 $3x+20^\circ = 2x-40^\circ + 2x+20^\circ$
 $3x+20^\circ = 4x-20^\circ$
 $4x - 3x = 20^\circ + 20^\circ$
 $x = 40^\circ$
 $\angle ACX = 3 \times 40^\circ + 20^\circ = 140^\circ$

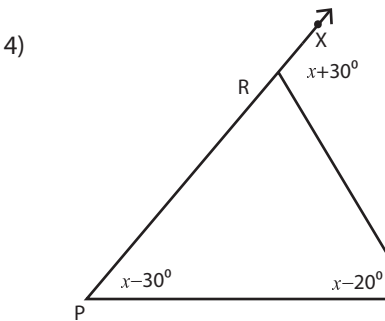
Find the value of x and unknown exterior angle for each triangle.



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



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



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

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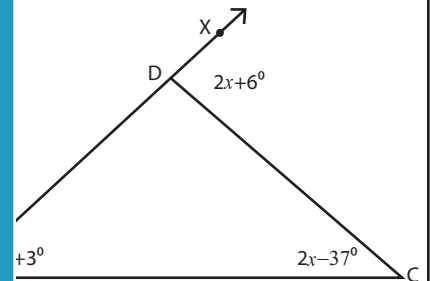
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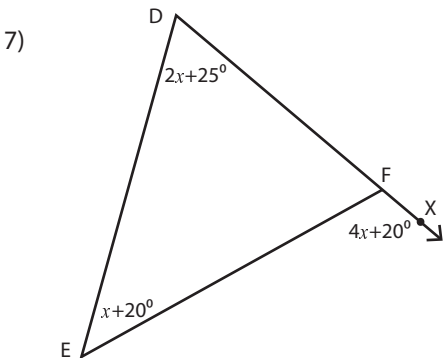
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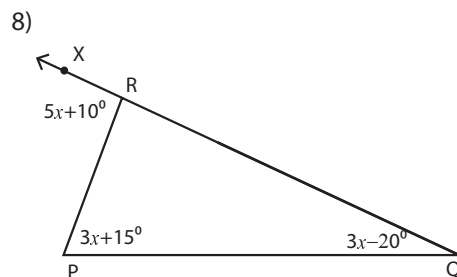
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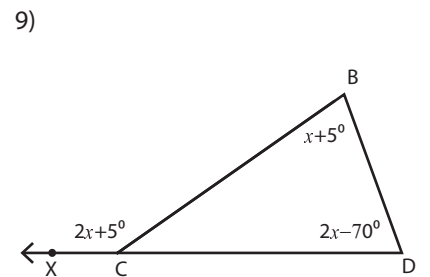
$= \underline{\hspace{2cm}}$; $\angle CDX = \underline{\hspace{2cm}}$



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



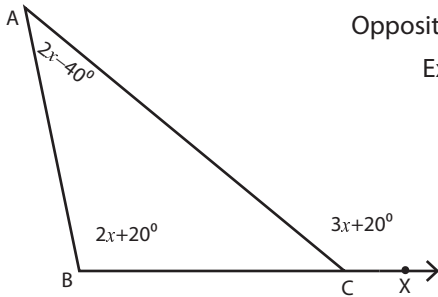
$x = \underline{\hspace{2cm}}$; $\angle PRX = \underline{\hspace{2cm}}$



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

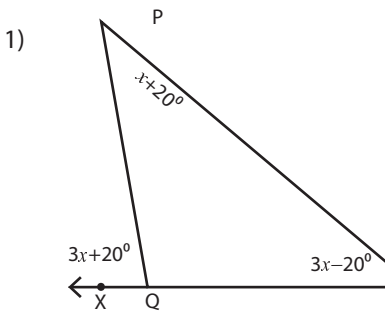
Triangle - Exterior Angle

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

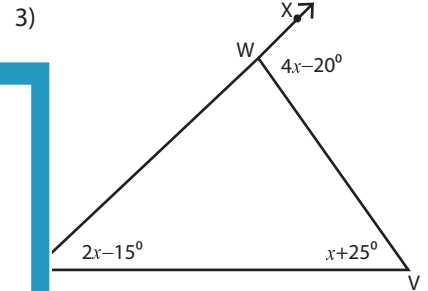


Exterior angle : $\angle ACX$
 Opposite interior angles : $\angle A$ and $\angle B$
 Exterior angle = Sum of opposite interior angles
 $\angle ACX = \angle A + \angle B$
 $3x+20^\circ = 2x-40^\circ + 2x+20^\circ$
 $3x+20^\circ = 4x-20^\circ$
 $4x - 3x = 20^\circ + 20^\circ$
 $x = 40^\circ$
 $\angle ACX = 3 \times 40^\circ + 20^\circ = 140^\circ$

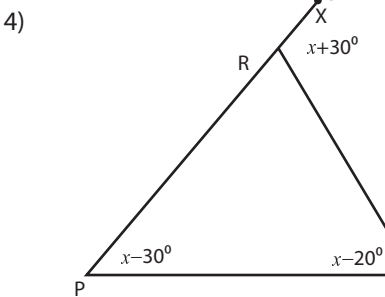
Find the value of x and unknown exterior angle for each triangle.



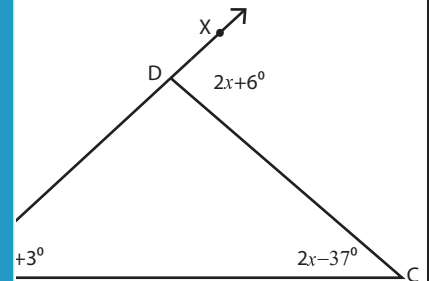
$x = 20^\circ$; $\angle PQX = 80^\circ$



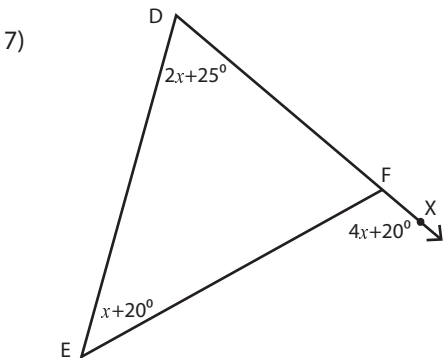
$x = 30^\circ$; $\angle VWX = 100^\circ$



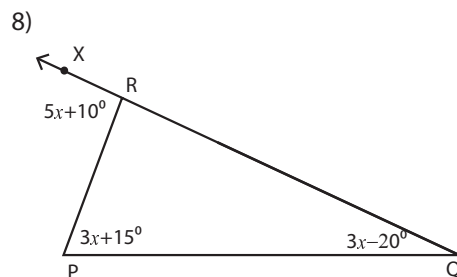
$x = 80^\circ$; $\angle QRX = 110^\circ$



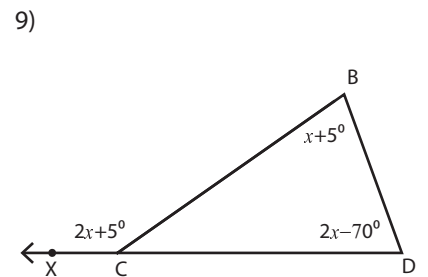
$x = 40^\circ$; $\angle CDX = 86^\circ$



$x = 25^\circ$; $\angle EFX = 120^\circ$



$x = 15^\circ$; $\angle PRX = 85^\circ$



$x = 70^\circ$; $\angle BCX = 145^\circ$

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