

Lines and angles Ex 14.1 Q27

## Answer:

$$\angle AOB + \angle BOC = 180^{\circ}$$
 (Linear pair)  
 $\Rightarrow 3x + 3x = 180^{\circ}$   
 $\Rightarrow 6x = 180^{\circ}$   
 $\Rightarrow x = \frac{180^{\circ}}{6} = 30^{\circ}$ 

Lines and angles Ex 14.1 Q28

## Answer:

$$\angle AOB + \angle BOC = 180^{\circ}$$
 (Linear pair)  
 $\Rightarrow 70^{\circ} + 2x = 180^{\circ}$   
 $\Rightarrow 2x = 180^{\circ} - 70^{\circ} = 110^{\circ}$   
 $\Rightarrow x = \frac{110^{\circ}}{2} = 55^{\circ}$ 

Lines and angles Ex 14.1 Q29

## Answer:

$$\angle \mathrm{QOP} + \angle \mathrm{QOR} + \angle \mathrm{ROS} = 180^\circ$$
 (Angles on a straight line)   
  $\Rightarrow 60^\circ + 4x + 40^\circ = 180^\circ$    
  $\Rightarrow 100^\circ + 4x = 180^\circ$    
  $\Rightarrow 4x = 180^\circ - 100^\circ = 80^\circ$    
  $\Rightarrow x = \frac{80^\circ}{4} = 20^\circ$