2.7 Test: Angle measures

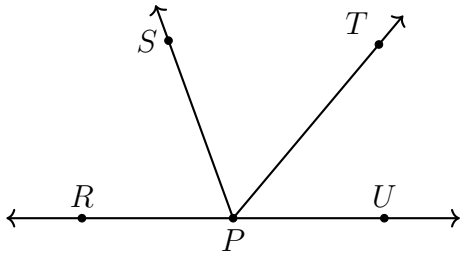
Diagrams are not necessarily drawn to scale unless otherwise stated.

1. Given the situation in the diagram, answer each question. Circle True or False.

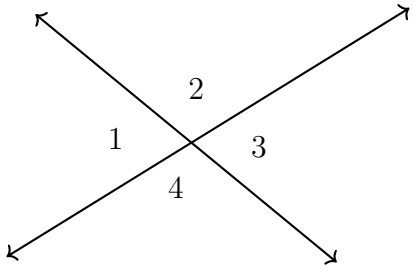
   (a) T or F: $\angle RPT$ and $\angle SPU$ are adjacent angles.

   (b) T or F: $\angle TPS$ is an obtuse angle.

   (c) T or F: $\overrightarrow{PS}$ and $\overrightarrow{PT}$ are opposite rays.



2. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$.



   (a) Given that $m\angle 1 = 65°$, find $m\angle 3 =$ _____

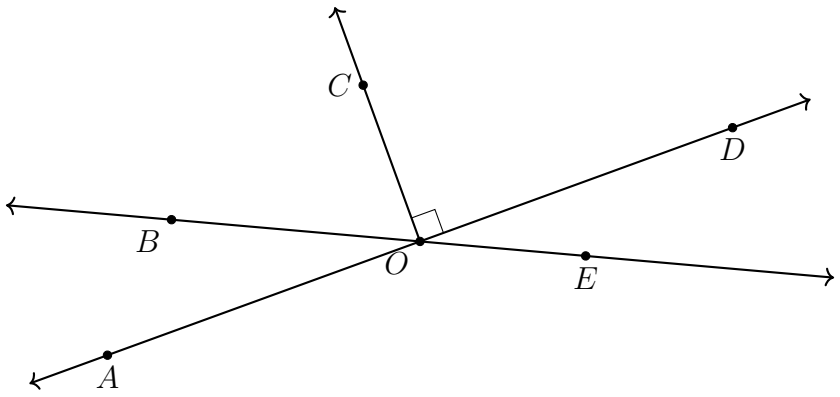
   (b) $\angle 2 \cong$ _____

   (c) True or false, $\angle 1$ and $\angle 4$ are complementary angles. _____

3. (a) Given, the diagram below. Name a right angle: _____

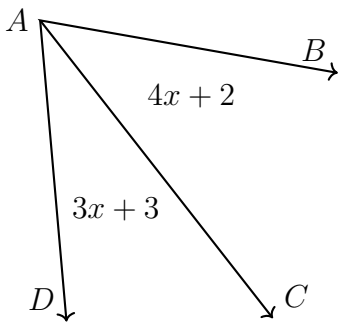
   (b) Name an angle that is complementary to $\angle AOB$: _____

   (c) Name the angle that is opposite to $\angle DOE$: _____

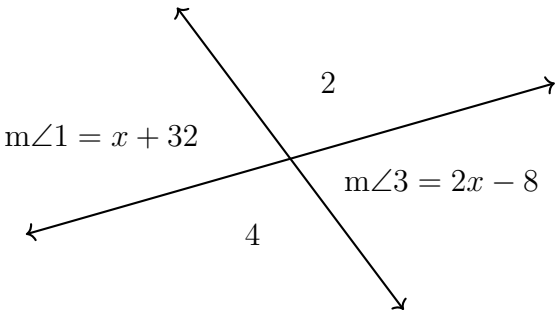


For full credit on these three problems, start with an equation and check your solution.

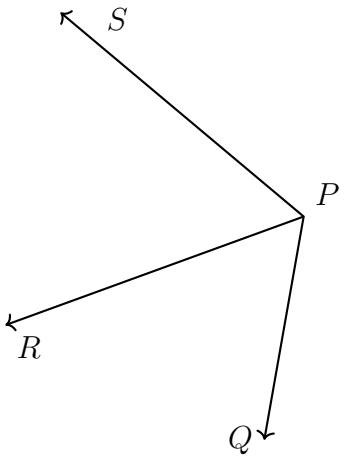
4. Given $\text{m}\angle BAC = 4x + 2$ and $\text{m}\angle CAD = 3x + 3$, $\text{m}\angle BAD = 75°$. Find $\text{m}\angle BAC$.



5. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $\text{m}\angle 1 = x + 32$ and $\text{m}\angle 3 = 2x - 8$, find $\text{m}\angle 1$.

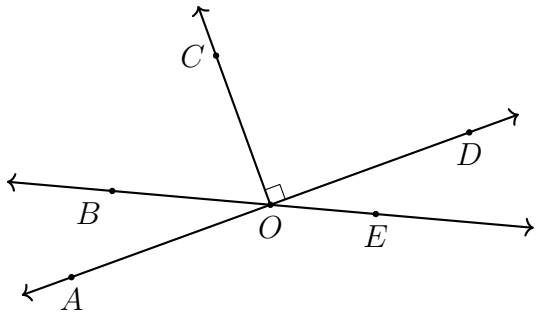


6. An angle bisector is shown below, with $\overrightarrow{PR}$ bisecting $\angle QPS$. Given $\text{m}\angle QPR = 5x - 8$ and $\text{m}\angle RPS = 3x + 20$, find $\text{m}\angle QPS$.

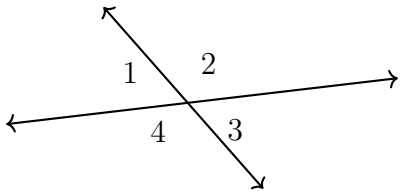


Do Not Solve!
Model the situation with an equation. Circle where it states what to find.

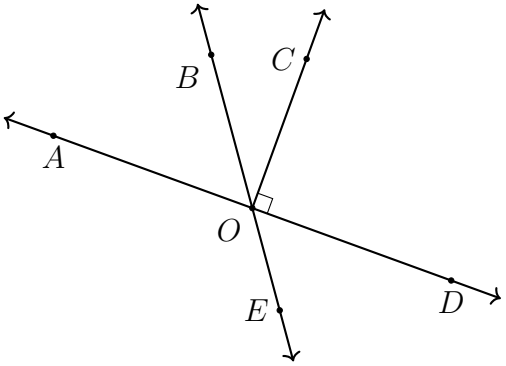
7. In the diagram below $\angle AOB = 2x$ and $\angle COB = 5x + 20$. Find m$\angle AOB$.



8. Two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that m$\angle 1 = 6x + 28$ and m$\angle 3 = 8x + 12$. Find m$\angle 1$.



9. In the diagram below $\angle AOB = 10x + 3$ and $\angle DOE = 63°$. Find x.



10. Given that m$\angle 2 = 10x - 20$ and m$\angle 3 = 3x + 5$ as shown in the diagram, find m$\angle 2$.