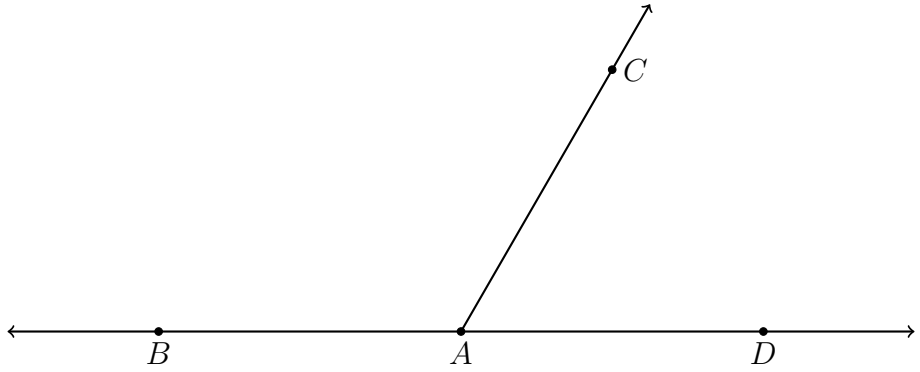
2.3 Classwork: Special angle pairs

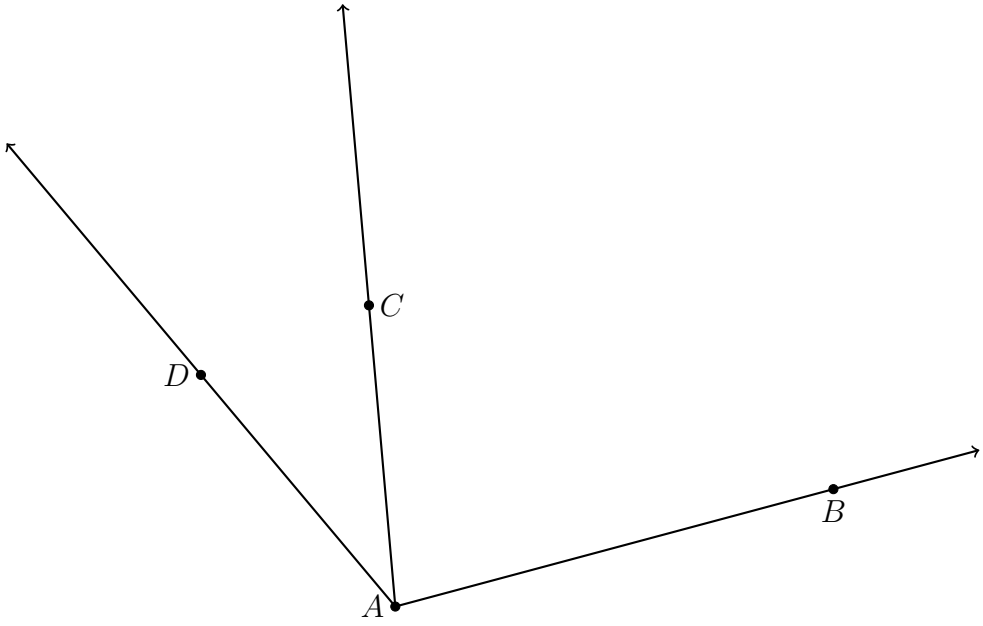
1. Given a straight line and a ray, making two angles.
   (a) Write down the names of the two angles using proper notation.

   (b) Using a protractor, measure the two angle in degrees.

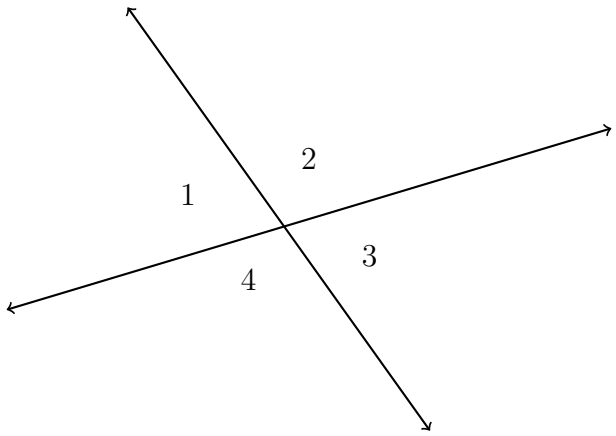
   (c) Do they sum to 180°?



2. Write down the name of the *three* angles shown in the diagram below and their angle measures, using your protractor.



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

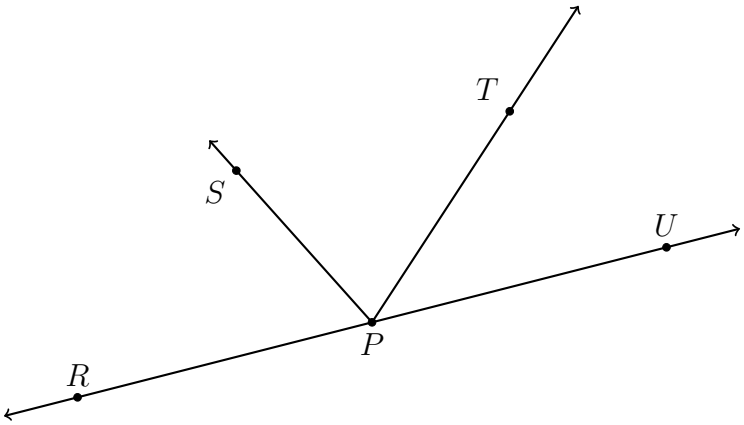


   (a) Which angle is opposite $\angle 1$? _____

   (b) Name an angle that is adjacent to $\angle 4$. _____

   (c) True or false, $\angle 2$ and $\angle 4$ are vertical angles. _____

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



   (a) True or False: $\overrightarrow{RP}$ and $\overrightarrow{UP}$ are opposite rays.

   (b) True or False: $\angle TPR$ is an obtuse angle.

   (c) True or False: $\angle RPS$ and $\angle SPU$ are supplementary angles.

   (d) True or False: $\angle RPS$ and $\angle SPT$ are adjacent angles.

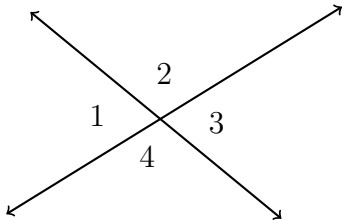
5. Identify the true statements

   (a) $\angle 1 \cong \angle 2$

   (b) $\angle 2 \cong \angle 4$

   (c) $m\angle 1 + m\angle 4 = 180°$

   (d) $m\angle 2 + m\angle 3 = 90°$

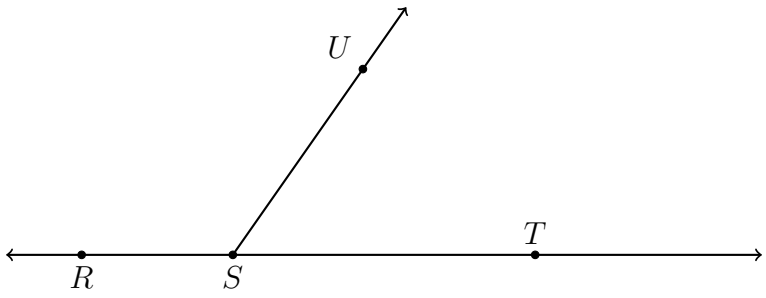


6. Find the measure of the angle in degrees and the given segment's length in centimeters.

   (a) $m\angle UST =$ _____

   (b) $SU =$ _____

   (c) Name a pair of opposite rays: _____

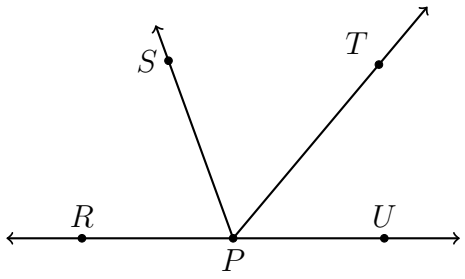


7. Given the situation in the diagram, answer each question. Circle True or False.

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

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

   (c) T or F: $\angle TPU$ is an acute angle.

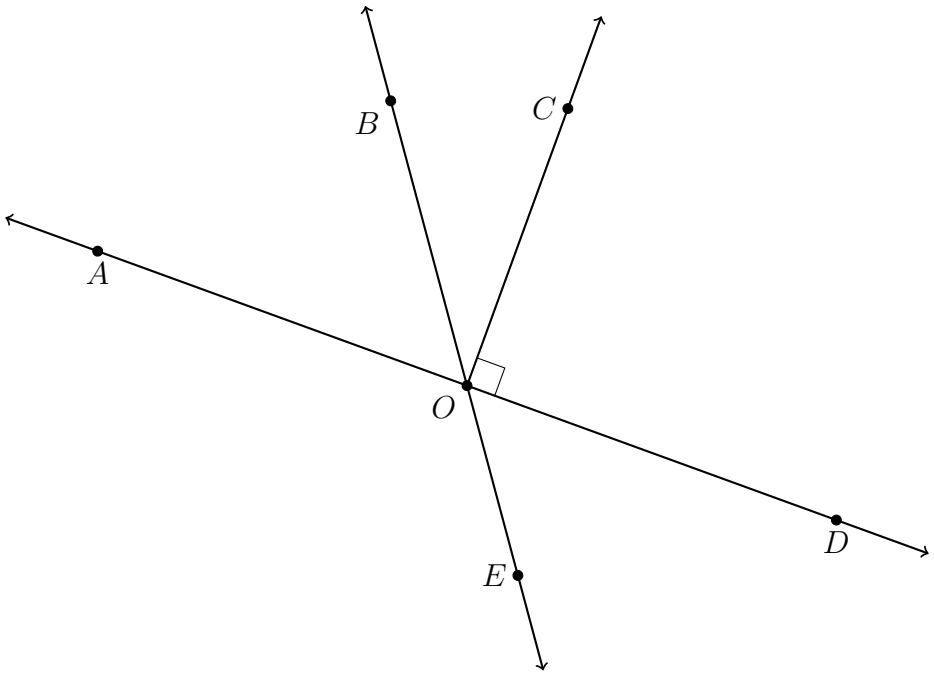


8. Measure the required angles of the diagram below and answer the questions.

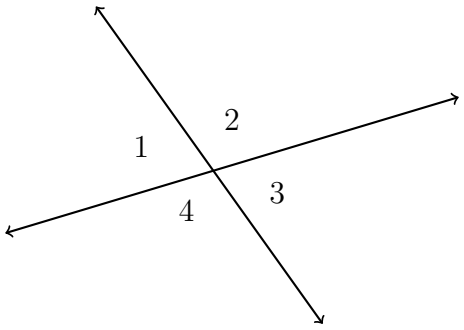
   (a) $m\angle AOB =$ _____ $m\angle BOC =$ _____ $m\angle DOE =$ _____

   (b) Name an angle that is vertical to $\angle DOE$: _____

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



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



(a) Which angle is opposite $\angle 1$? _____

(b) Name an angle that is adjacent to $\angle 4$. _____

(c) True or false, $\angle 2$ and $\angle 4$ are vertical angles. _____

10. Write the appropriate name for the type of angle depending on its measure in degrees. (acute, right, obtuse, or straight)

    (a) $m\angle = 90$: _____

    (b) $90 < m\angle < 180$: _____

    (c) $0 < m\angle < 90$: _____

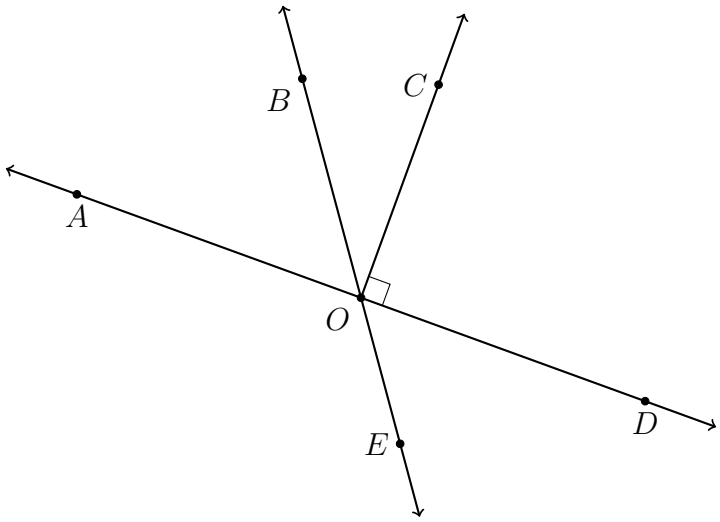
    (d) $m\angle = 180$: _____

11. Given the diagram below.

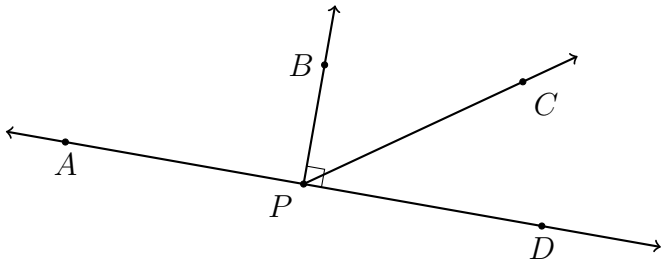
    (a) Name an angle that is vertical to $\angle DOE$: _____

    (b) Name the ray that is opposite to $\overrightarrow{OB}$: _____

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



12. Angles APC and CPD form a linear pair. $m\angle APC = 10x + 15$ and $m\angle CPD = 3x - 4$. Find $m\angle CPD$. Check your answer for full credit.



13. Angles APC and CPD form a linear pair. $m\angle APC = 10x + 15$ and $m\angle CPD = 3x - 4$. Find $m\angle CPD$. Check your answer for full credit.