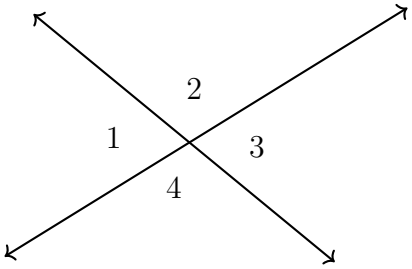
2.3 Classwork: Vertical angles

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

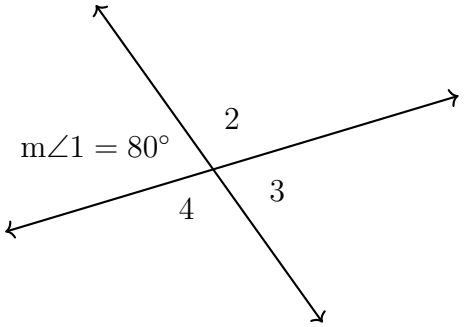


   (a) Which angle is opposite $\angle 1$? _____

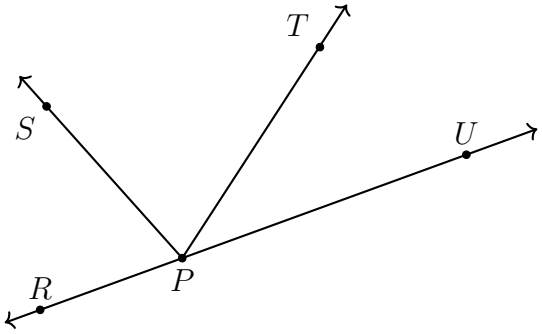
   (b) Name an angle that is adjacent to $\angle 4$. _____

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

2. Two lines intersect with $m\angle 1 = 80°$. Find and mark the measures of $\angle 2$, $\angle 3$, and $\angle 4$.



3. 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.

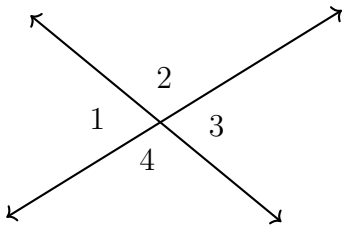
4. Identify the true statements

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

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

   (c) $\mathrm{m}\angle 1 + \mathrm{m}\angle 4 = 180°$

   (d) $\mathrm{m}\angle 2 + \mathrm{m}\angle 3 = 90°$

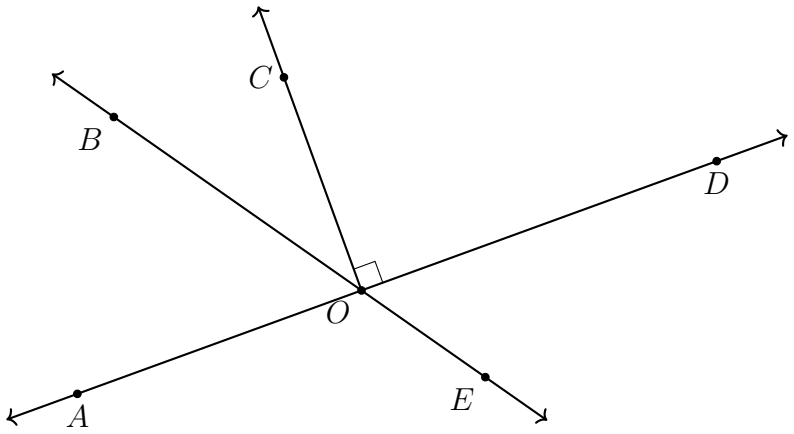


5. Measure the required angles of the diagram below and answer the questions.

   (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 $\angle AOB$: _____



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