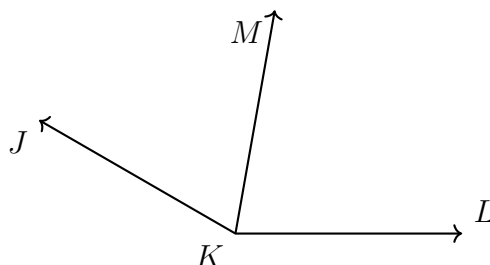


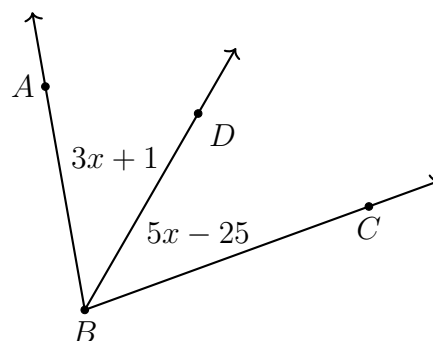
2.4 Homework: Modeling with algebra, “Do Not Solve!”

1. The ray \overrightarrow{KM} bisects $\angle JKL$. Given $m\angle JKM = 4x - 20$ and $m\angle MKL = 3x + 4$. Identify the true statement(s).

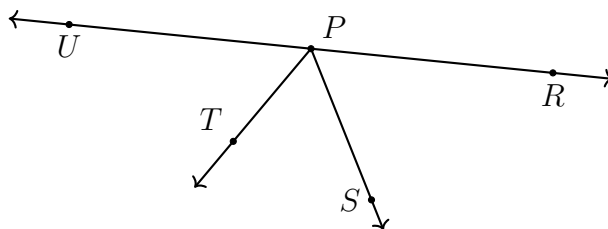
- (a) $\angle JKM$ and $\angle MKL$ are a linear pair
 $(4x - 20) + (3x + 4) = 180^\circ$
- (b) $\angle JKM, \angle MKL$ are adjacent and
 $4x - 20 = 90^\circ$
- (c) $\angle JKM \cong \angle MKL$
 $4x - 20 = 3x + 4$



2. The ray \overrightarrow{BD} bisects $\angle ABC$. $m\angle ABD = 3x + 1$, $m\angle DBC = 5x - 25$. Find $m\angle ABC$.



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

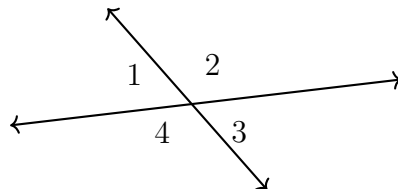


- (a) True or False: \overrightarrow{RP} and \overrightarrow{UP} are opposite rays.
- (b) True or False: $\angle TPR$ is supplementary to $\angle TPU$.
- (c) True or False: $\angle RPS$ and $\angle TPS$ are complementary angles.
- (d) True or False: $\angle RPS$ and $\angle TPU$ are vertical angles.

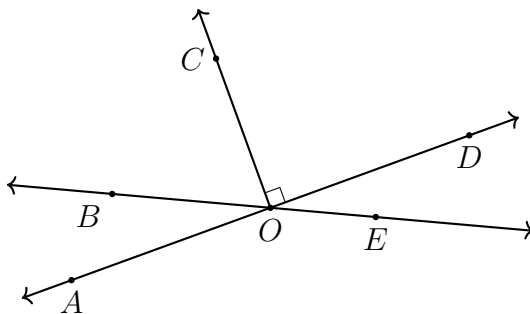
Do Not Solve!

Model the situation with an equation. Circle where it states what to solve for.

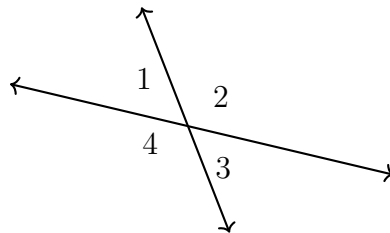
4. Two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = 4x + 30$ and $m\angle 2 = 8x - 10$. Find x .



5. In the diagram below $\angle AOB = 30^\circ$ and $\angle COB = 5x + 10$. Find x .



6. Given that $m\angle 2 = 5x + 30$ and $m\angle 4 = 7x - 10$ as shown in the diagram, find $m\angle 2$.



7. In the diagram below $\angle DOE = 60^\circ$ and $\angle DOB = 13x - 10$. Find x .

