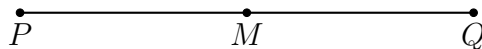


Name:

2.5 Homework: Mixed practice

1. Do Now: Given M bisects \overline{PQ} , $PM = x + 7$, $PQ = 23$.

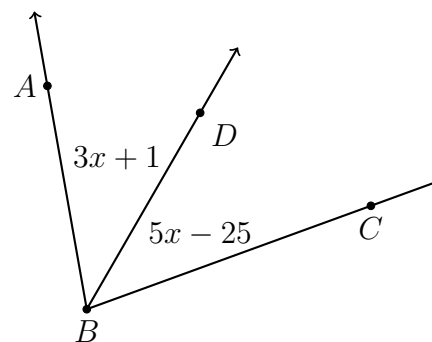
tick marks



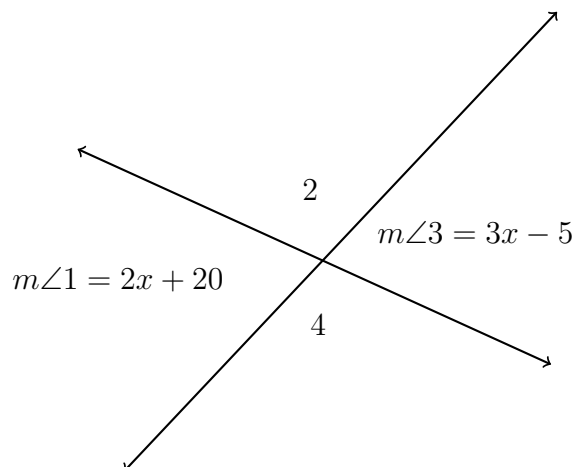
(b) Write an equation and solve for x

(a) Mark the diagram with the values and (c) Check your result

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



3. Two lines intersect with vertical angles $m\angle 1 = 2x + 20$ and $m\angle 3 = 3x - 5$. Find $m\angle 2$.



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

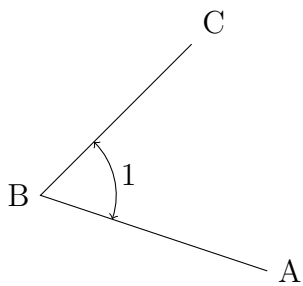
(a) $m\angle = 90$: _____

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

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

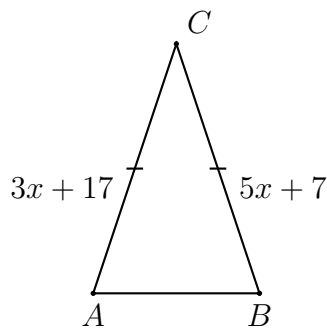
(d) $m\angle = 180$: _____

5. Write down the name of the given angle three different ways.

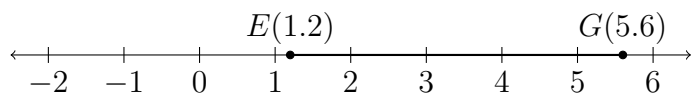


6. Points that are all located on the same plane are _____.

7. Spicy: Given isosceles $\triangle ABC$ with $\overline{AC} \cong \overline{BC}$. $AC = 5x + 7$ and $BC = 3x + 17$. Find AC .



8. Given points on the number line $E(1.2)$ and $G(5.6)$ as shown. Find the midpoint F of \overline{EG} . Mark it on the number line and label it as an ordered pair.



9. Identify the true statement(s) given $\angle AOB = 2x$ and $\angle BOC = 5x + 20$.

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(a) $\angle AOB \cong \angle BOC$

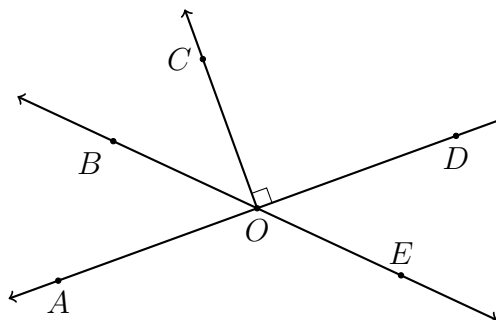
$$2x = (5x + 20)$$

(b) $\angle AOB, \angle BOC$ are complementary

$$2x + (5x + 20) = 90^\circ$$

(c) $\angle AOB$ and $\angle BOC$ are a linear pair

$$2x + (5x + 20) = 180^\circ$$



Copy the correct equation and solve for x . Check your answer.

10. 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

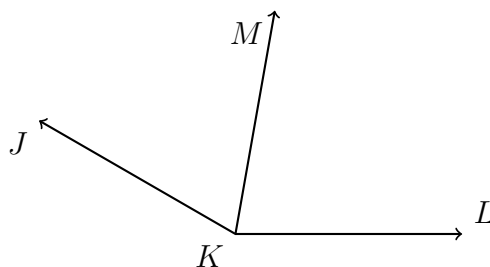
$$(4x - 20) + (3x + 4) = 180^\circ$$

(b) $\angle JKM, \angle MKL$ are adjacent and

$$4x - 20 = 90^\circ$$

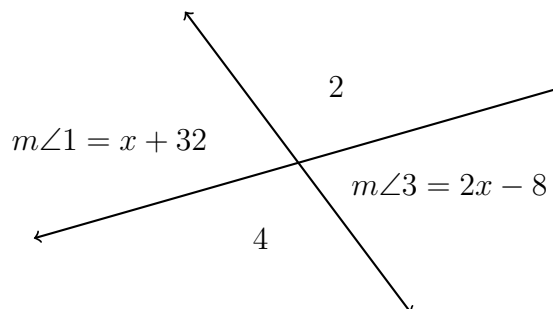
(c) $\angle JKM \cong \angle MKL$

$$4x - 20 = 3x + 4$$



Copy the correct equation and find $m\angle JKL$. Check your answer.

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



12. An angle bisector is shown below, with \overrightarrow{PR} bisecting $\angle QPS$. Given $m\angle QPR = 6x - 12$ and $m\angle QPS = 10x + 4$, find $m\angle QPS$.

