

Create your own Math Adventure

Name: _____

Geometry

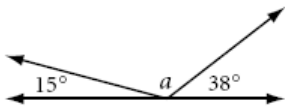
Date: _____ Block: _____

Adventure 1: Angles

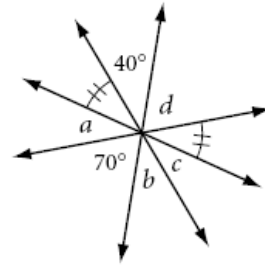
Show all work for each problem you complete.

Find the measure of all the missing angles.

1. $a =$ _____



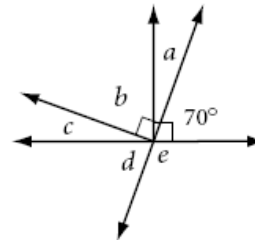
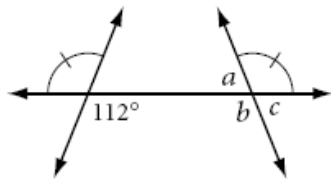
2. $a =$ _____ $b =$ _____ $c =$ _____ $d =$ _____



If you got 1 and all of 2 correct move to question 5. If you missed any part proceed to question 3 and 4.

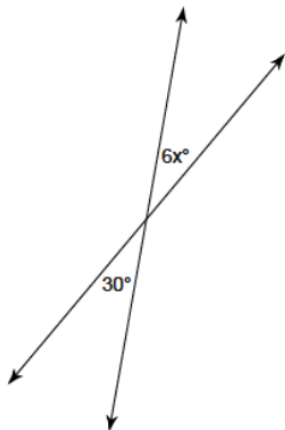
3. $a =$ _____ $b =$ _____ $c =$ _____

4. $a =$ _____ $b =$ _____ $c =$ _____ $d =$ _____ $e =$ _____

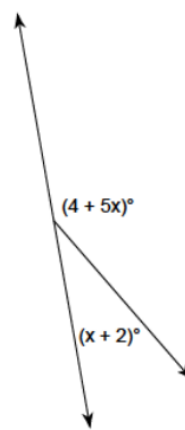


Write and solve an equation to find the missing x value.

5. $x =$ _____



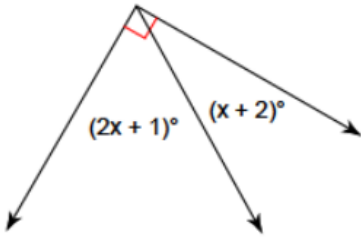
6. $X =$ _____



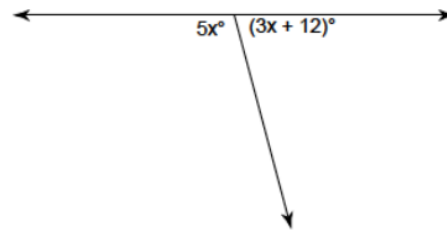
If you correctly found the value for 5 and 6 move to question 9. If not complete question 7 and 8.

Find the value of x

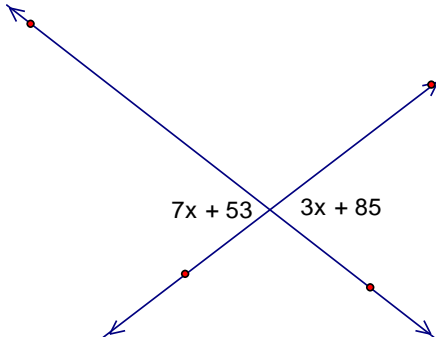
7. $x =$ _____



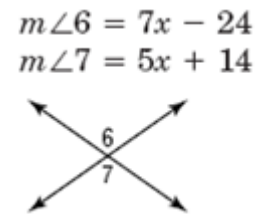
8. $x =$ _____



9. Find the value of x

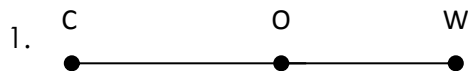


10. Find the value of angle 6



Adventure 2: Segments

Write the segment addition postulate for the points in each figure.

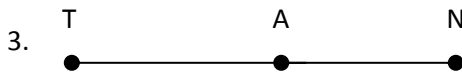


Sketch the segment described.

2. Points A, B and C are collinear with A between B and C.

If you got 1 and all of 2 correct move to question 5. If you missed any part proceed to question 3 and 4.

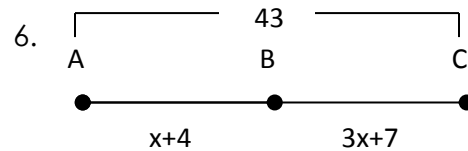
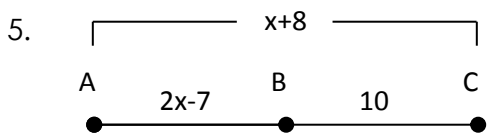
Write the segment addition postulate for the points in each figure.



Sketch the segment described.

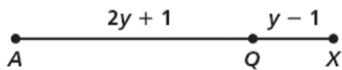
4. Points B, D and R are collinear with D outside of B and R.

Use the segment addition postulate to the length of \overline{AC} .



If you correctly found the value for 5 and 6 move to question 8. If not complete question 7

7. If $AX = 45$, find the value of y , AQ , and QX



Draw and label an appropriate picture then solve. Show all of your work.

8. Q, A, and D are collinear with D between A and Q. If $AQ = 15x - 31$, $QD = 4x + 6$, and $DA = 3x - 5$, solve for QD .

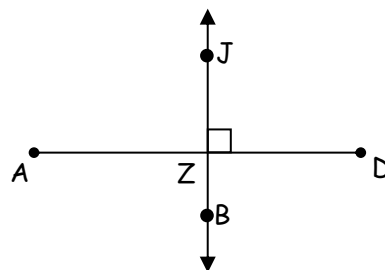
9. B is the midpoint of \overline{AC} . $AB = 2x - 1$ and $AC = 3x + 2$. Draw the diagram.

$x = \underline{\hspace{2cm}}$ $AB = \underline{\hspace{2cm}}$ $BC = \underline{\hspace{2cm}}$ $AC = \underline{\hspace{2cm}}$

10. Given \overleftrightarrow{JB} is the segment bisector of \overline{AD} ,

$AD = 24$, $AZ = 2x + 4$, and $m\angle JZA = 3y$,

Find the value of x and y .



1. 127°

2. $a = 35^\circ$ $b = 40^\circ$ $c = 35^\circ$ $d = 70^\circ$

3. $a = 68^\circ$ $b = 112^\circ$ $c = 68^\circ$

4. $a = 20^\circ$ $b = 70^\circ$ $c = 20^\circ$ $d = 70^\circ$ $e = 110^\circ$

5. $x = 5$

6. $x = 29$

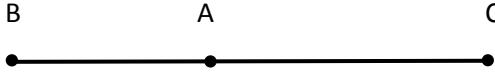
7. $x = 29$


8. $x = 21$

9. $x = 8$

10. $m\angle 6 = 109$

Segments

1. $\overline{CO} + \overline{OW} = \overline{CW}$ 2.  3. $\overline{TA} + \overline{AN} = \overline{TN}$

4.  5. $x = 5$ 6. $x = 8$ 7. $y = 15$ $\overline{AQ} = 31$ $\overline{QX} = 14$ 8. $\overline{QD} = 22$

9. $x = 4$ $\overline{AB} = 7$ $\overline{BC} = 7$ $\overline{AC} = 14$

10. $x = 4$ $y = 30$