Key

Math 1

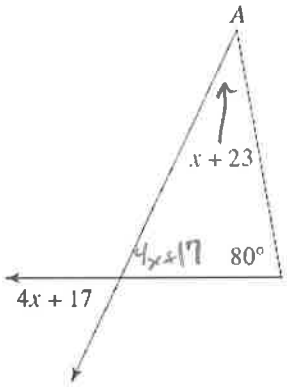
Name _____

6-4 Triangle Properties Practice 2

Date_____

Solve for Angle A in the following.

1.



$x + 23 + 4x + 17 + 80 = 180$

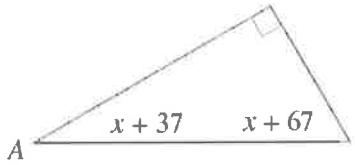
$5x + 120 = 180$

$5x = 60$

$x = 12$

$m\angle A = 12 + 23 = \boxed{45°}$

2.



$x + 37 + x + 67 + 90 = 180$

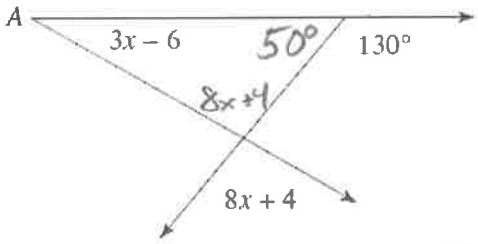
$2x + 194 = 180$

$2x = -14$

$x = -7$

$m\angle A = -7 + 37 = \boxed{30°}$

3.



$3x - 6 + 8x + 4 + 50 = 180°$

$11x + 48 = 180$

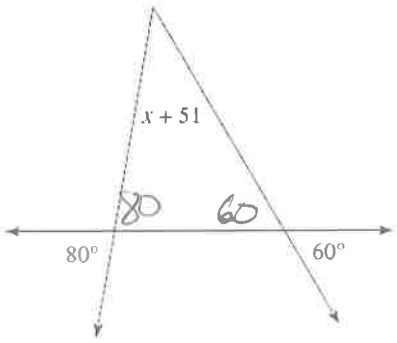
$11x = 132$

$x = 12$

$m\angle A = 3(12) - 6 = \boxed{30°}$

Solve for x or the question mark in the following.

4.

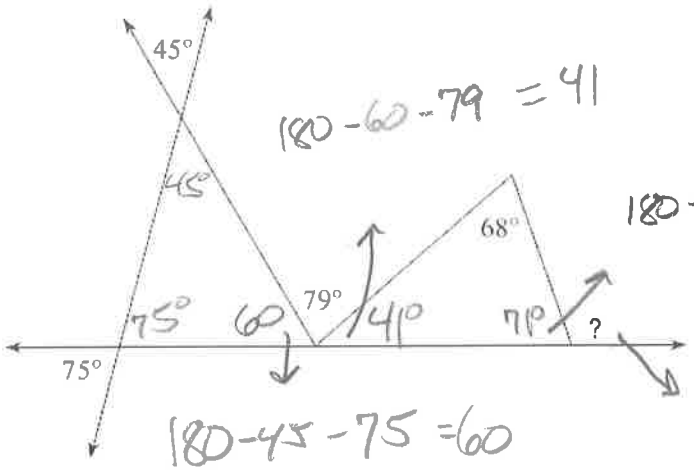


$80 + 60 + x + 51 = 180$

$x + 191 = 180$

$\boxed{x = -11}$

5.



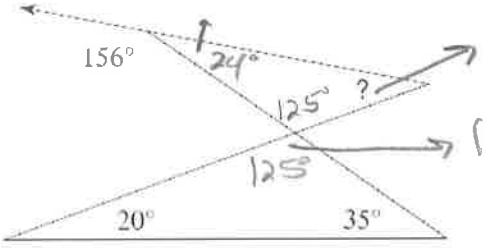
180 - 60 - 79 = 41

180 - 68 - 41 = 71°

180 - 71 = 109°

180 - 45 - 75 = 60

6.



180 - 156 = 24°

180 - 125 - 24 = 31°

180 - 35 - 20 = 125°

State if the three numbers can be the measures of the side of a triangle.

7. 4, 7, 8

Yes!

8. 1, 13, 13

Yes!

9. 3, 6, 2

No, since $2+3 \neq 6$

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

10. 9, 5

$5+9=14$

$9-5=4$

$4 < x < 14$ → means: "between 4 & 14"

11. 14, 11

$14-11=3$

$14+11=25$

$3 < x < 25$