

For questions 1 – 4, $\triangle ABC \cong \triangle XYZ$.

1)	$m\angle A = 108$ $m\angle B = 42$ $AB = 4$ $BC = 54$ <i>perimeter of $\triangle ABC = 75$</i>	$m\angle X = \underline{\hspace{2cm}}$ $m\angle Y = \underline{\hspace{2cm}}$ $m\angle Z = \underline{\hspace{2cm}}$ $XY = \underline{\hspace{2cm}}$ $YZ = \underline{\hspace{2cm}}$ $XZ = \underline{\hspace{2cm}}$
2)	$m\angle A = 11x - 46$ $m\angle X = 6x + 34$ $AC = 2y + 11$ $XZ = 6y - 37$	$x = \underline{\hspace{2cm}}$ $m\angle A = \underline{\hspace{2cm}}$ $m\angle X = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$ $AC = \underline{\hspace{2cm}}$ $XZ = \underline{\hspace{2cm}}$
3)	$m\angle A = 74$ $m\angle B = 83$ $m\angle Z = 2x + 5$ $AB = x + 8$ $XZ = 5x - 12$	$x = \underline{\hspace{2cm}}$ $m\angle X = \underline{\hspace{2cm}}$ $m\angle Y = \underline{\hspace{2cm}}$ $m\angle Z = \underline{\hspace{2cm}}$ $XY = \underline{\hspace{2cm}}$ $XZ = \underline{\hspace{2cm}}$
4)	$m\angle A = 5x + 47$ $m\angle B = 4x + 6$ $m\angle C = 5y - 4$ $m\angle X = 92$ $AB = y + 11$ $BC = 4x - 1$	$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$ $m\angle Y = \underline{\hspace{2cm}}$ $m\angle Z = \underline{\hspace{2cm}}$ $XY = \underline{\hspace{2cm}}$ $YZ = \underline{\hspace{2cm}}$

Determine if the following triangles are congruent. If yes, make a congruency statement and give the reason why they are congruent. If they are not congruent, write "not congruent".

5)	6)	7)
8)	9)	10)