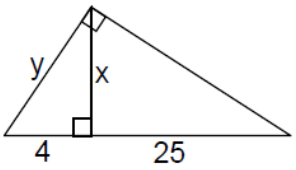
Name:_____

GCC Unit 5 Day 7 **Ratios and Similarity**

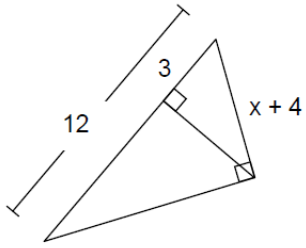
Geometric Mean: Lesson U5D4, U5D5, U5D6

#1: **Solve for the value of x and y.**

x=_____y=_____



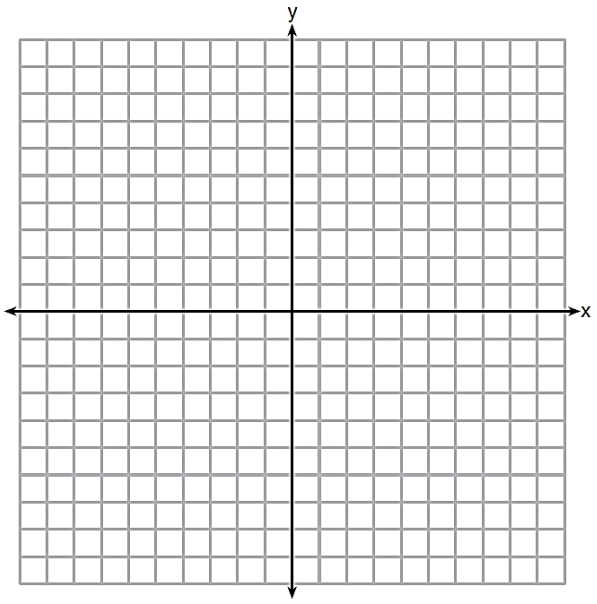
Solve for the value of x.



#2: Line segment NY has endpoints $N(-11,5)$ and $Y(5,-7)$. What is the equation of the perpendicular bisector of $\overline{NY}$?

#3: Point P is on segment AB such that $AP:PB$ is $4:5$. If A has coordinates $(4,2)$, and B has coordinates $(22,2)$, determine and state the coordinates of P.

#4: Point P is on the directed line segment from point X(0, -5) to point $Y(6,7)$ and divides the segment in the ratio 1:5. What are the coordinates of point P?



#5: What are the coordinates of point C on the directed segment from $A(-8,4)$ to $B(10,-2)$ that partitions the segment such that $AC:CB$ is 2:1?

1) (1,1) 2) (–2,2) 3) (2,–2) 4) (4,0)

#6: Show how you arrived at your response!

The ratio of similarity of $\triangle BOY$ to $\triangle GRL$ is 1:2. If $BO = x + 3$ and $GR = 3x - 1$, then the length of $\overline{GR}$ is

(1) 5 (3) 10

(2) 7 (4) 20

#7: Two Δ are similar. The sides of the first Δ are 5, 10, and 15. The largest side of the second Δ is 20. Find the perimeter of the second Δ.

#8: The areas of two similar polygons are in the ratio 36:49. Find the ratio of the corresponding sides.

#9: The perimeters of two similar triangles is in the ratio 2: 4. The sum of their areas is 100 cm^2. Find the area of each triangle.