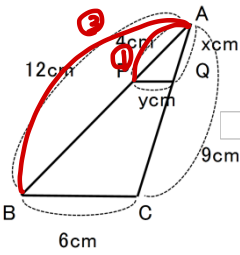


# 相似な図形（平行線と線分の比）

組 番 名前

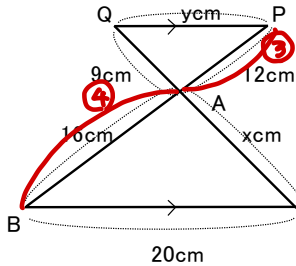
1 次の図で、 $x$ 、 $y$ の値を求めなさい。

①  $BC \parallel PQ$



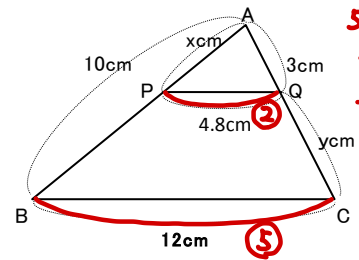
$$\begin{aligned} 9:x &= 3:1 \\ 3x &= 9 \\ x &= 3 \\ 6:y &= 3:1 \\ 3y &= 6 \\ y &= 2 \end{aligned}$$

②  $BC \parallel QP$



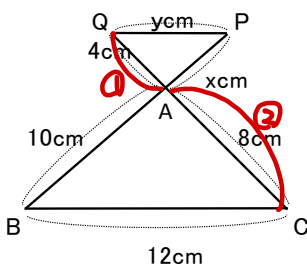
$$\begin{aligned} 4:3 &= x:9 \\ 3x &= 36 \\ x &= 12 \\ 4:3 &= 20:y \\ 4y &= 60 \\ y &= 15 \end{aligned}$$

③  $BC \parallel PQ$



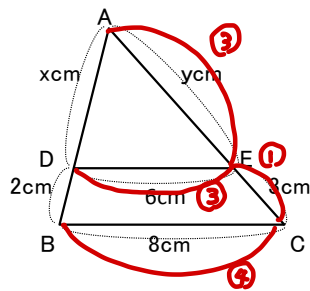
$$\begin{aligned} 5:2 &= 10:x \\ 5x &= 20 \\ x &= 4 \\ 3:2 &= y:3 \\ 2y &= 9 \\ y &= \frac{9}{2} \end{aligned}$$

④  $BC \parallel QP$



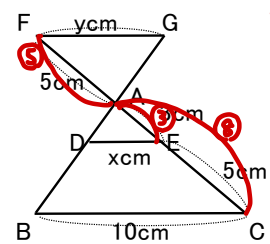
$$\begin{aligned} x &= 5 \\ y &= 6 \end{aligned}$$

⑤  $BC \parallel DE$



$$\begin{aligned} 3:1 &= x:2 \\ x &= 6 \\ 3:1 &= y:3 \\ y &= 9 \end{aligned}$$

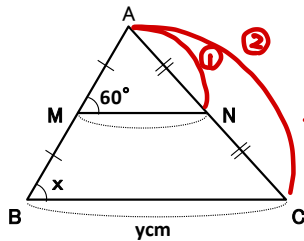
⑥  $BC \parallel DE \parallel FG$



$$\begin{aligned} 8:5 &= 10:y \\ 8y &= 50 \\ y &= \frac{25}{2} \\ 5:3 &= \frac{25}{2}:x \\ 5x &= \frac{75}{2} \\ x &= \frac{15}{2} \end{aligned}$$

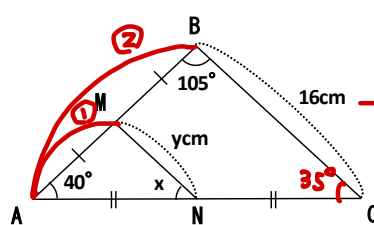
2 M, Nはそれぞれ AB, BC の中点である。∠xの大きさと yの長さを求めなさい。

①



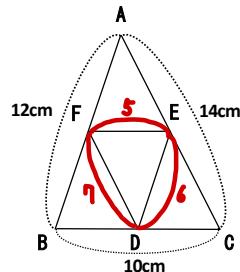
$$\begin{aligned} \angle x &= 60^\circ \\ y &= 12 \end{aligned}$$

②



$$\begin{aligned} \angle x &= 35^\circ \\ y &= 8 \end{aligned}$$

3 D, E, Fはそれぞれ辺 BC, CA, AB の中点とすると、△DEFの3辺の長さの和を求めなさい。



$$18 \text{ cm}$$

4 右の図で、 $AB \parallel QR$ ,  $PQ \parallel BC$ のとき、 $x$ 、 $y$ の値を求めなさい。

$$3:2 = x:5$$

$$2x = 15$$

$$x = \frac{15}{2}$$

$$3:2 = y:6$$

$$2y = 18$$

$$y = 9$$

