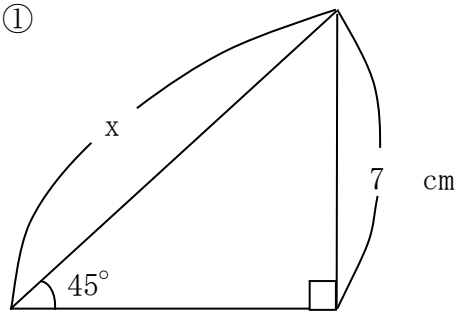
特別の三角形な三平方辺の比1

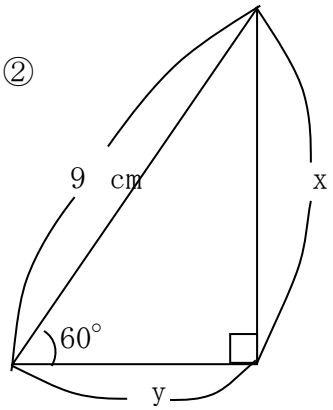
NO. 2　　名前　　／6　点

1　次 x、y の の値を求めよ。

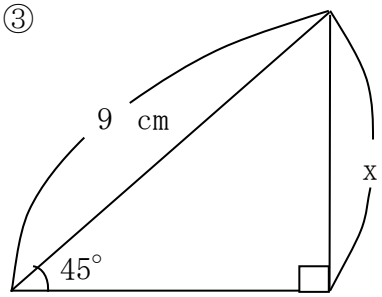
①



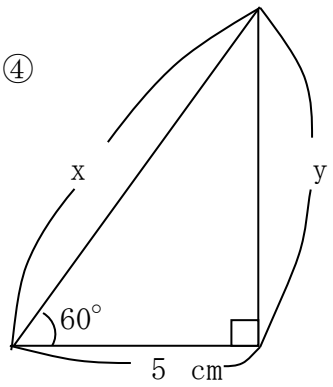
②



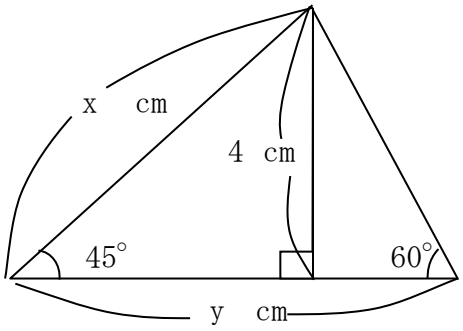
③



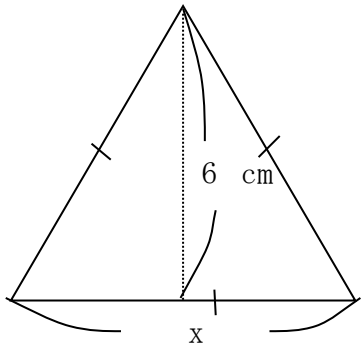
④



⑤



⑥　正三角形



解答

2

①
$\sqrt{2} : 1 = x : 7$
$x = 7\sqrt{2}$

②
$2 : \sqrt{3} = 9 : x$
$2x = 9\sqrt{3}$
$x = \frac{9\sqrt{3}}{2}$

$2 : 1 = 9 : y$
$2y = 9$
$y = \frac{9}{2}$

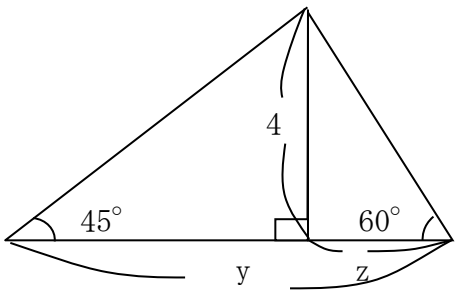
③ $\sqrt{2} : 1 = 9 : x$
$\sqrt{2}x = 9$
$x = \frac{9}{\sqrt{2}} = \frac{9\sqrt{2}}{2}$

④ $2 : 1 = x : 5$
$x = 10$

$1 : \sqrt{3} = 5 : y$
$y = 5\sqrt{3}$

⑤ $\sqrt{2} : 1 = x : 4$
$x = 4\sqrt{2}$

⑥ $\frac{x}{2} = y$ とおく



図の部分をzとおく

$\sqrt{3} : 1 = 4 : z$
$\sqrt{3}z = 4$
$z = \frac{4}{\sqrt{3}} = \frac{4\sqrt{3}}{3}$

$y = 4\sqrt{2} + \frac{4\sqrt{3}}{3}$

$\sqrt{3} : 1 = 6 : y$
$\sqrt{3}y = 6$
$y = \frac{6}{\sqrt{3}}$
$y = 2\sqrt{3}$

$x = 2 \times 2\sqrt{3}$
$= 4\sqrt{3}$