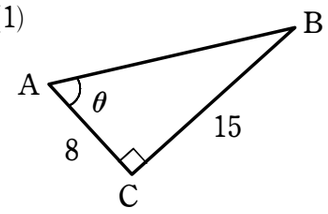
1 右の図において，$\sin\theta$，$\cos\theta$，$\tan\theta$ の値を，それぞれ求めよ。

(1)



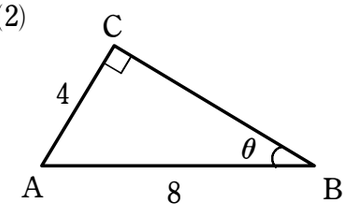

$AB^2 = 8^2 + 15^2$

$= 64 + 225$

$= 289$

$AB = 17$

(2)




$8^2 = 4^2 + BC^2$

$BC^2 = 64 - 16$

$= 48$

$BC = 4\sqrt{3}$

(1) $\sin\theta = \frac{15}{17}$，$\cos\theta = \frac{8}{17}$

$\tan\theta = \frac{15}{8}$

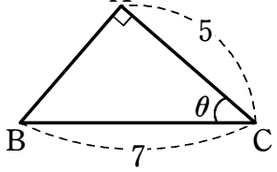
(2) $\sin\theta = \frac{1}{2}$，$\cos\theta = \frac{\sqrt{3}}{2}$

$\tan\theta = \frac{1}{\sqrt{3}}$

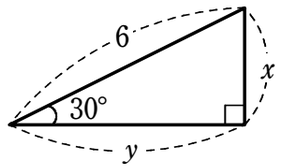
2 (1) 図(ア)で，$\sin\theta$，$\cos\theta$，$\tan\theta$ の値を求めよ。

(2) 図(イ)で，$x$，$y$ の値を求めよ。

(ア)




(イ)

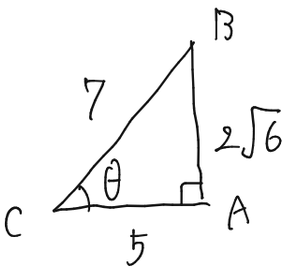



(1) $7^2 = AB^2 + 5^2$

$AB^2 = 49 - 25$

$= 24$

$AB = 2\sqrt{6}$




$\sin\theta = \frac{2\sqrt{6}}{7}$

$\cos\theta = \frac{5}{7}$，$\tan\theta = \frac{2\sqrt{6}}{5}$

(2) $6 : x = 2 : 1$

$x = 3$

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

$2y = 6\sqrt{3}$

$y = 3\sqrt{3}$

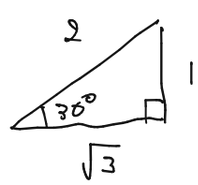
$x = 3$，$y = 3\sqrt{3}$

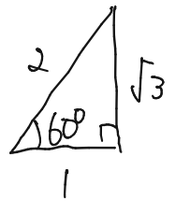
3 ~~(1) 図(ア)で，$\sin\theta$，$\cos\theta$，$\tan\theta$ の値を求めよ。~~

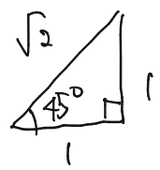
(2) 図(イ)で，$x$，$y$ の値を求めよ。

〈有名角〉

$30°$，$45°$，$60°$




$\sin 30° = \frac{1}{2}$，$\cos 30° = \frac{\sqrt{3}}{2}$

$\tan 30° = \frac{1}{\sqrt{3}}$

$\sin 45° = \frac{1}{\sqrt{2}}$，$\cos 45° = \frac{1}{\sqrt{2}}$

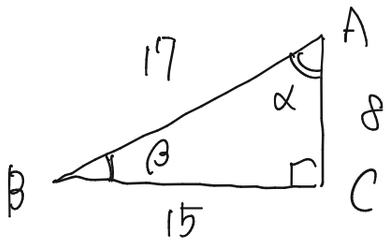
$\tan 45° = 1$

$\sin 60° = \frac{\sqrt{3}}{2}$，$\cos 60° = \frac{1}{2}$

$\tan 60° = \sqrt{3}$

4 $\angle C = 90°$ の直角三角形 ABC において，$AB = 17$，$BC = 15$，$CA = 8$ である。

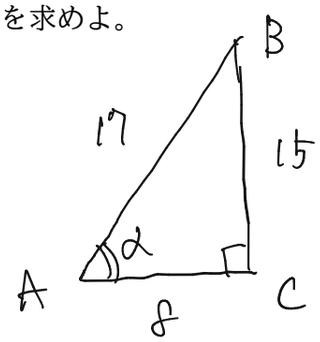
$\angle A = \alpha$，$\angle B = \beta$ の正弦，余弦，正接の値を求めよ。




$\sin\beta = \frac{8}{17}$

$\cos\beta = \frac{15}{17}$

$\tan\beta = \frac{8}{15}$




$\sin\alpha = \frac{15}{17}$

$\cos\alpha = \frac{8}{17}$

$\tan\alpha = \frac{15}{8}$