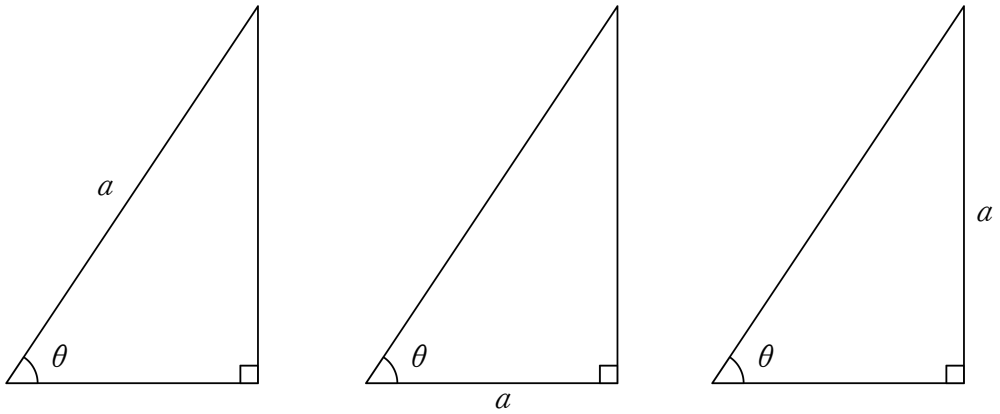
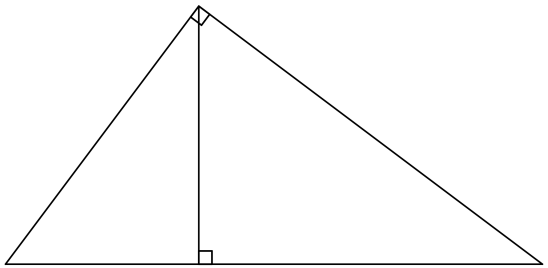
개념 기출 다잡기 삼각함수+도형+극한(삼도극)

직각삼각형

#삼각비

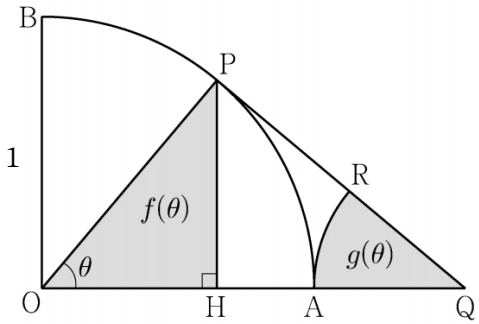


#o + x = 90° #닮음

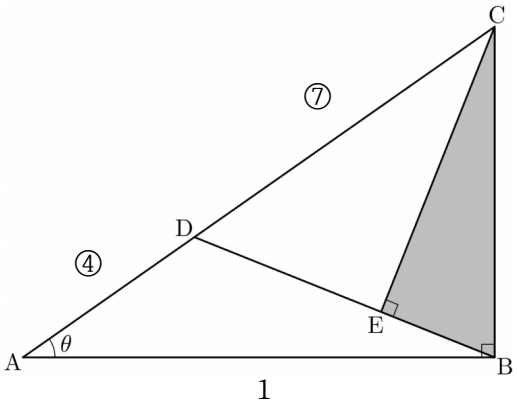


★핵심은 각의 크기, 변의 길이를 삼각함수로 나타내기

20200920가



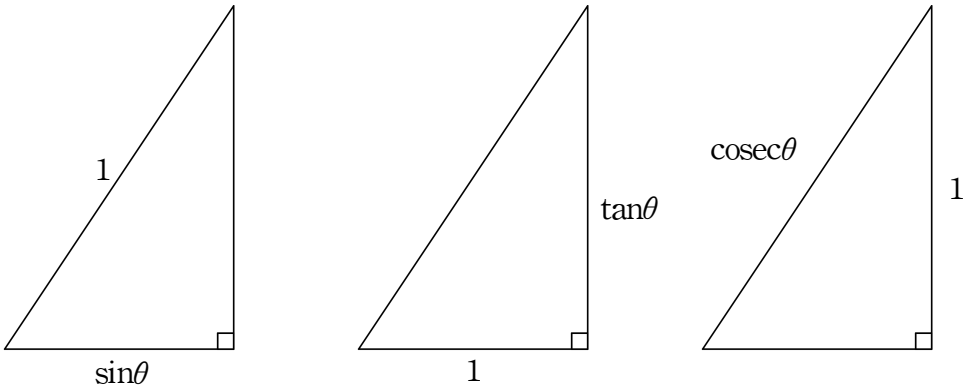
20200828사관가



삼각함수+도형+극한(삼도극)

직각삼각형

#피타고라스



#특수각

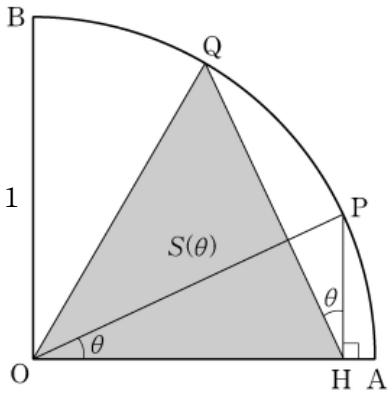
$3^2+4^2=5^2$

$5^2+12^2=13^2$

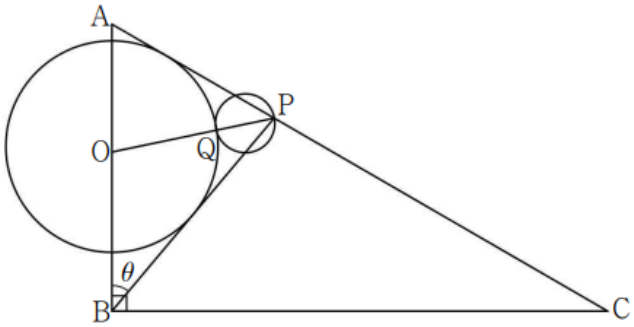
$\frac{\pi}{4} \rightarrow 1:1:\sqrt{2}$

$\frac{\pi}{6} \rightarrow 1:\sqrt{3}:2$

20190616가



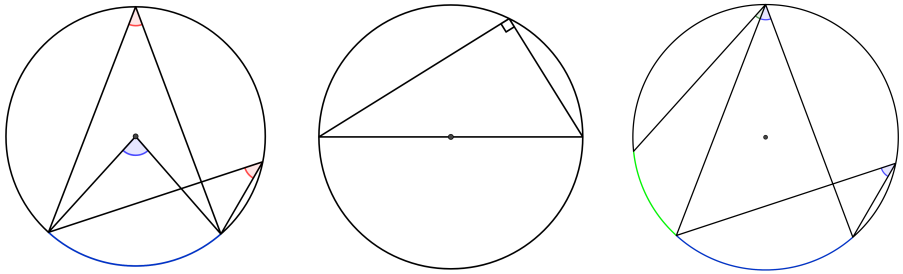
20180820사관가



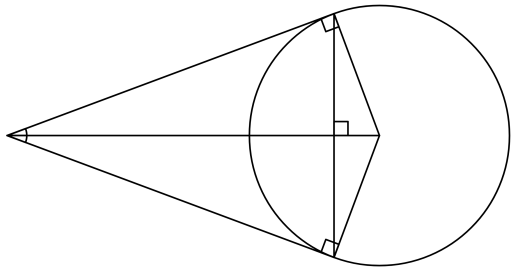
$\overline{AB}=2$, $\overline{BC}=2\sqrt{3}$

원 → 중심과 반지름 보조선

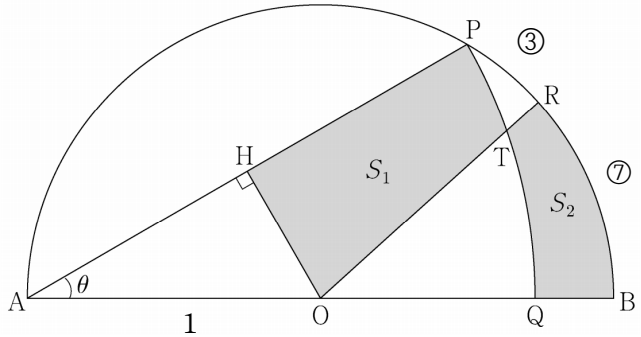
#원주각 일정 #2×원주각 = 중심각 #원주각 ∝ 호



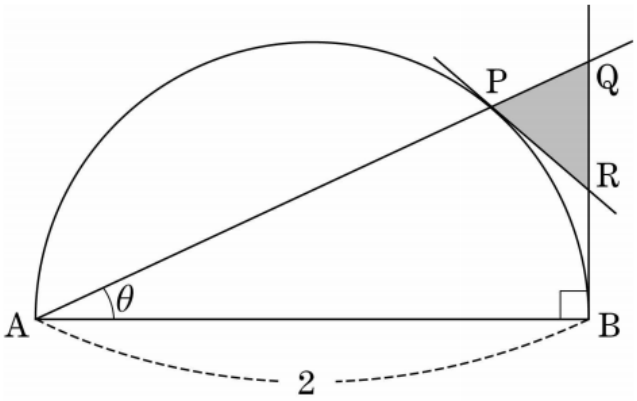
#원의 밖의 한 점에서 그은 접선



20200628가

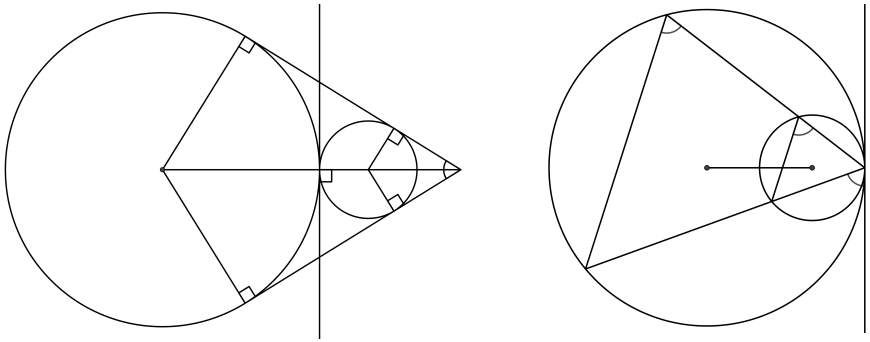


20130321B

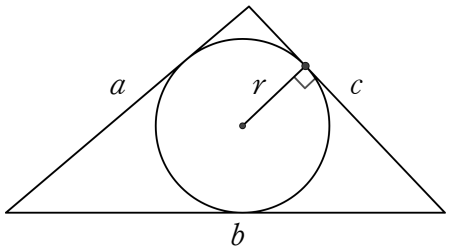


원 → 중심과 반지름 보조선

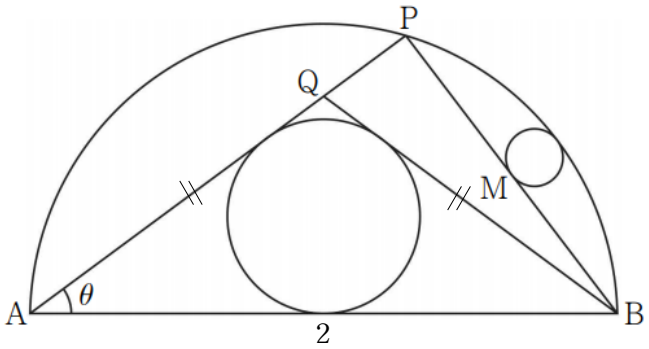
#외접하는 두 원 #내접하는 두 원



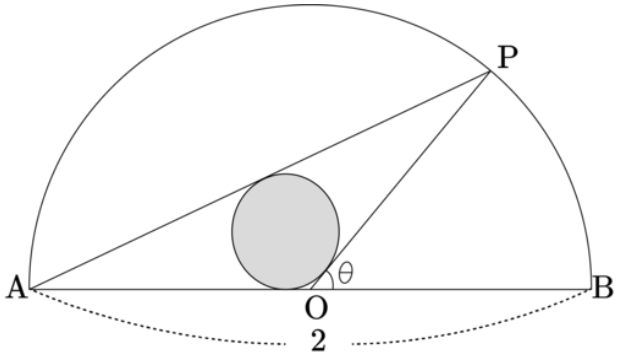
#삼각형에 내접하는 원의 반지름



20160429가

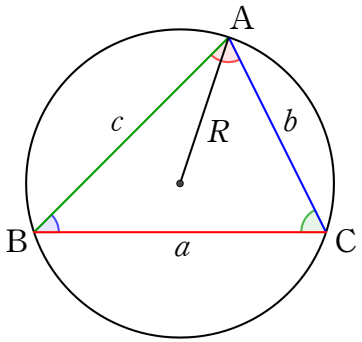


20120320가



삼각형

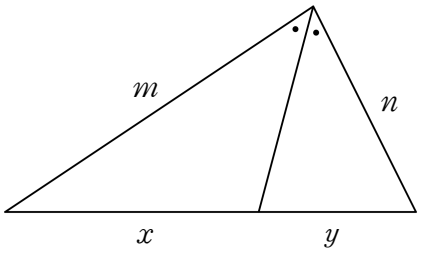
#사인법칙 #코사인법칙



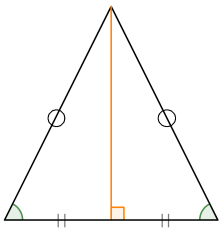
$$\frac{a}{\sin A}=\frac{b}{\sin B}=\frac{c}{\sin C}=2R$$

$$a^2=b^2+c^2-2bc\cos A$$

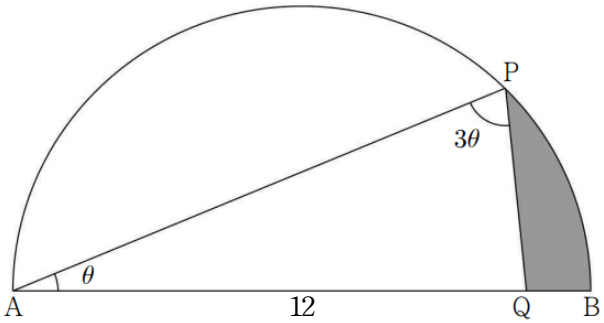
#내각이등분선 #이등변삼각형 → 수직이등분선



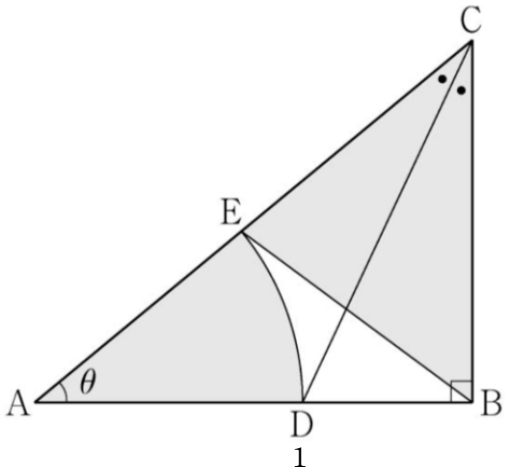
$$m:n=x:y$$



20150729B



20191118가



극한값의 계산

#극한값

$\lim_{x\to 0}\frac{\sin x}{x}=$

$\lim_{x\to 0}\frac{\tan x}{x}=$

$\lim_{x\to 0}\frac{1-\cos^2 x}{x^2}=$

$\lim_{x\to 0}\frac{1-\cos x}{x^2}=$

#각 변환

$\sin\left(\frac{\pi}{2}-\theta\right)=\cos\theta$

$\cos\left(\frac{\pi}{2}-\theta\right)=\sin\theta$

$\tan\left(\frac{\pi}{2}-\theta\right)=\cot\theta$

$\sin(\pi-\theta)=\sin\theta$

$\cos(\pi-\theta)=-\cos\theta$

$\tan(\pi-\theta)=-\tan\theta$

등

#근사

$x\to 0$일 때, $f(x)\to 0$이면

$\sin f(x)\to$

$\tan f(x)\to$

$1-\cos f(x)\to$

#덧셈정리

$\sin(\alpha-\beta)=\sin\alpha\cos\beta-\cos\alpha\sin\beta$

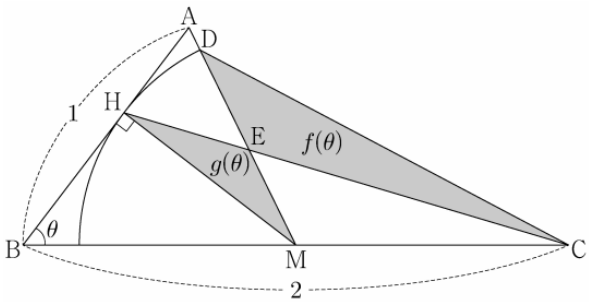
$\cos(\alpha-\beta)=\cos\alpha\cos\beta+\sin\alpha\sin\beta$

$\tan(\alpha-\beta)=\frac{\tan\alpha-\tan\beta}{1+\tan\alpha\tan\beta}$

$\lim_{\theta\to\frac{\pi}{3}}\frac{\sqrt{3}\cos\theta-\sin\theta}{\frac{\pi}{3}-\theta}$

$\lim_{\theta\to\frac{\pi}{4}}\frac{1-\tan\theta}{\frac{\pi}{4}-\theta}$

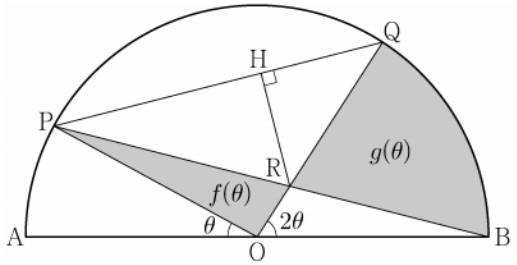
20210628가



$\lim_{\theta \to 0+} \frac{f(\theta)-g(\theta)}{\theta^3} = a$ 일 때, $80a$의 값을 구하시오.

20210928가

길이가 2인 선분 AB를 지름으로 하는 반원



$\lim_{\theta \to 0+} \frac{f(\theta)+g(\theta)}{\overline{RH}} = \frac{q}{p}$ 이다. $p+q$의 값을 구하시오.