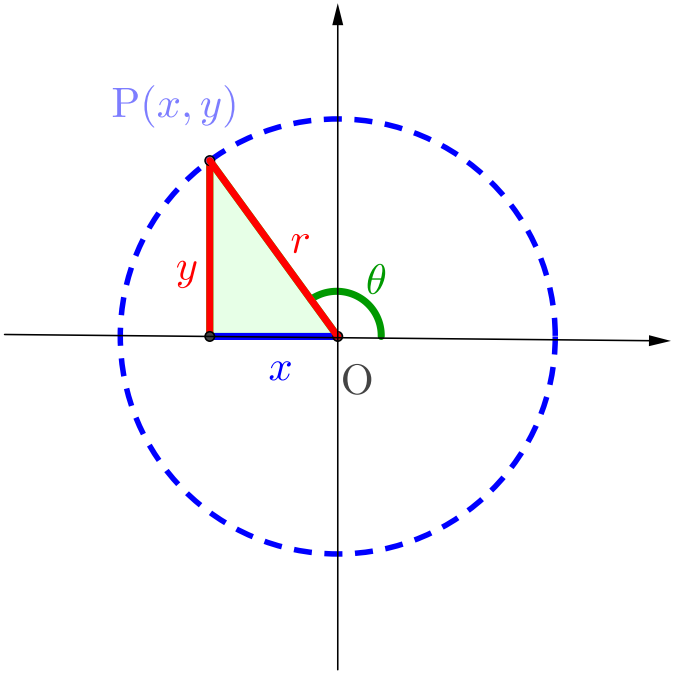
삼각함수의 기본공식
(Basic identities of trigonometric functions)

Basic identities of trigonometric functions

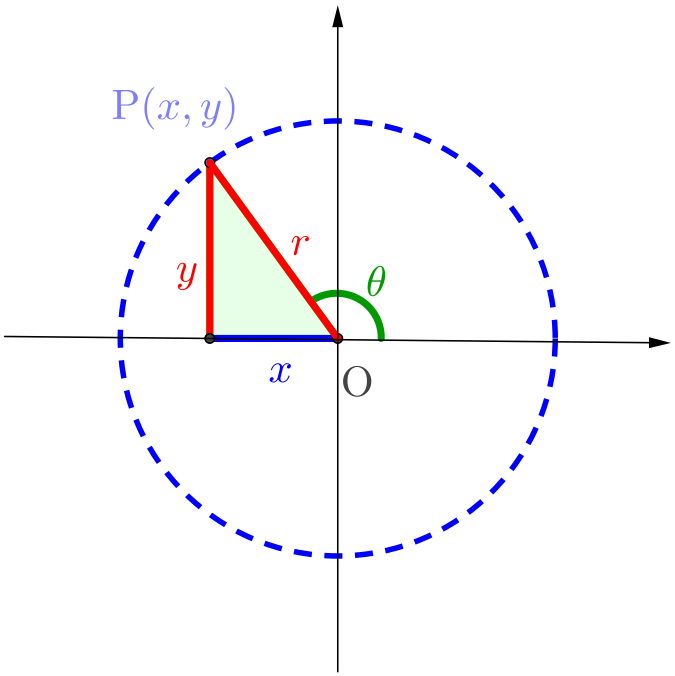
Start End

Basic identities of trigonometric functions

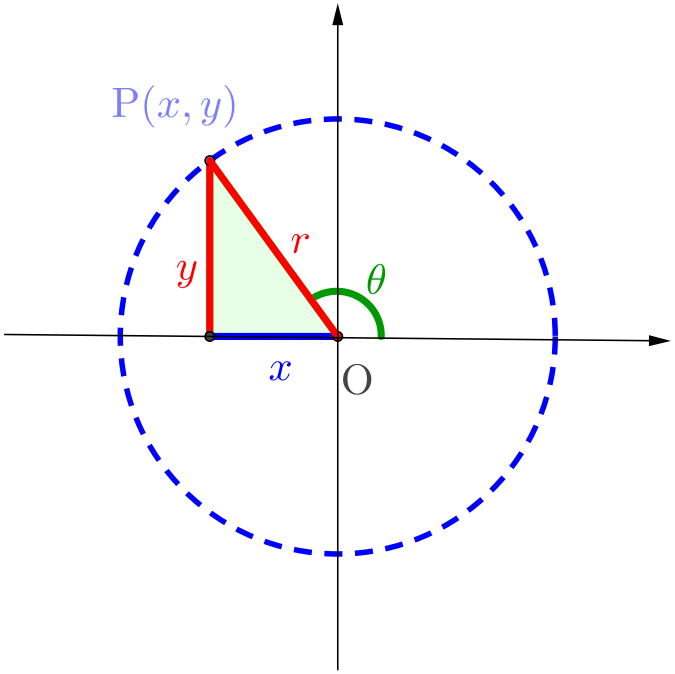
Start End



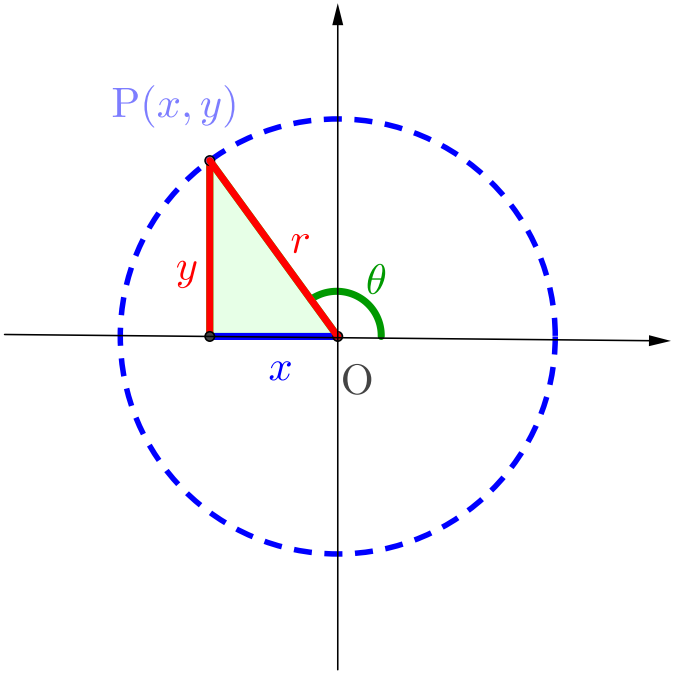
$$\frac{\sin\theta}{\cos\theta}$$



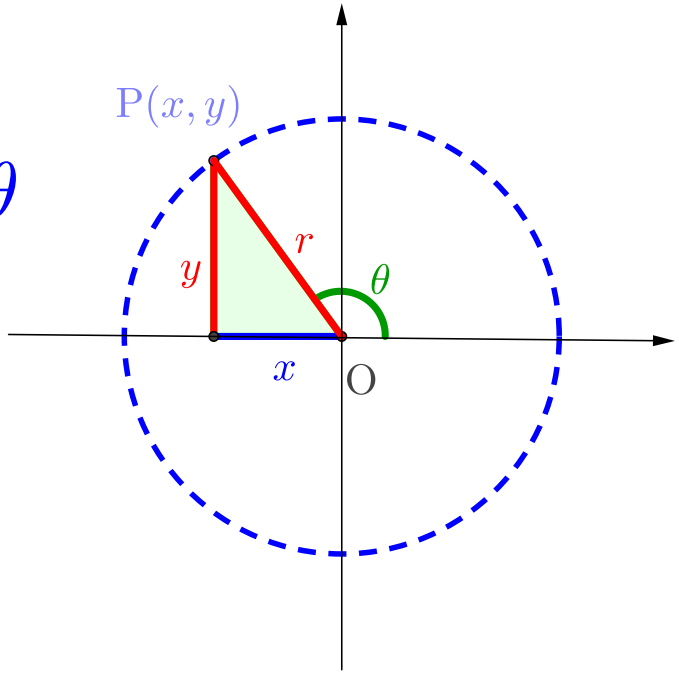
$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}}$$



$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x}$$

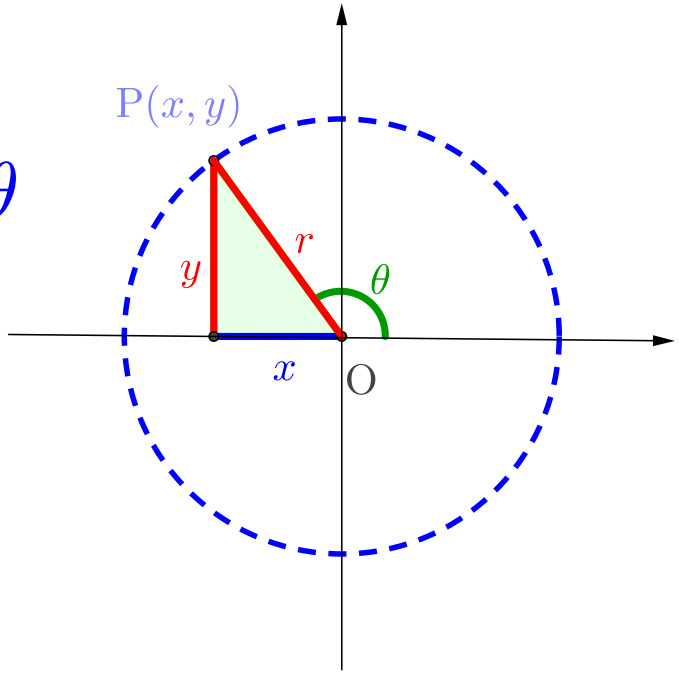


$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$



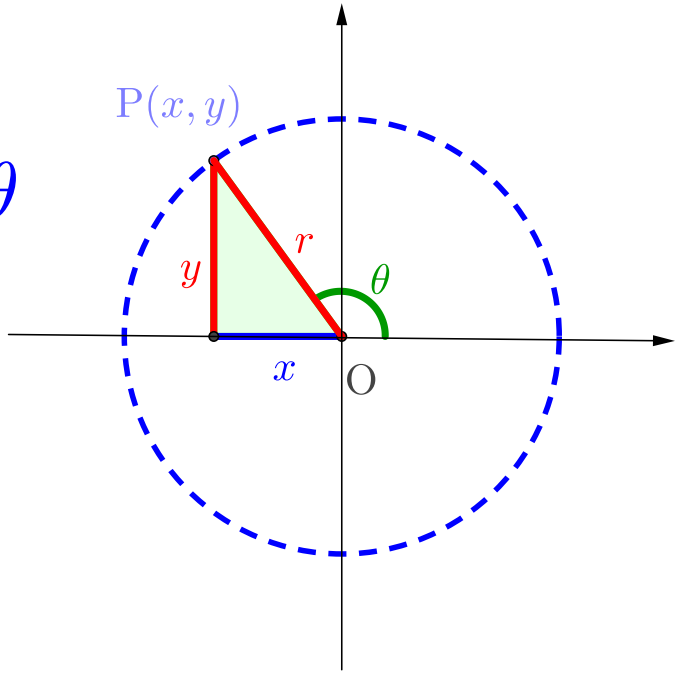
$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$

$$\sin^2\theta + \cos^2\theta$$



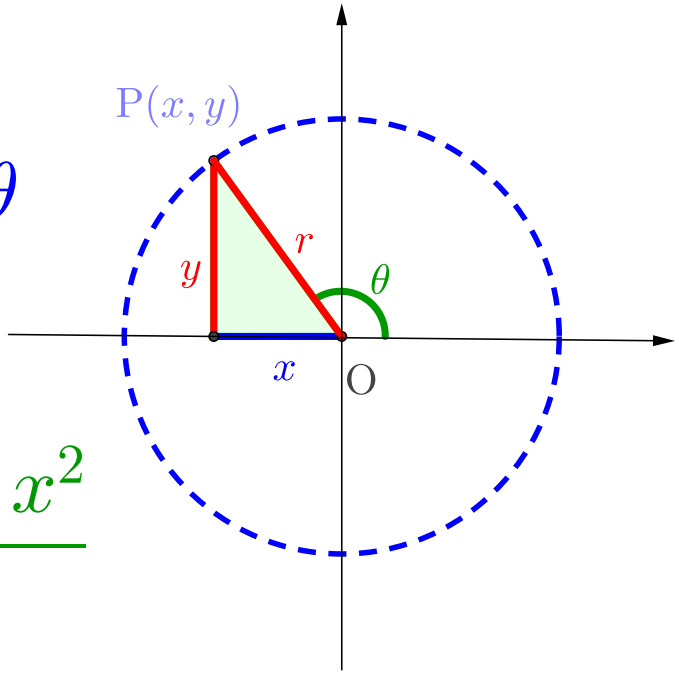
$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$

$$\sin^2\theta + \cos^2\theta = \left(\frac{y}{r}\right)^2 + \left(\frac{x}{r}\right)^2$$



$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$

$$\sin^2\theta + \cos^2\theta = \left(\frac{y}{r}\right)^2 + \left(\frac{x}{r}\right)^2 = \frac{y^2+x^2}{r^2}$$

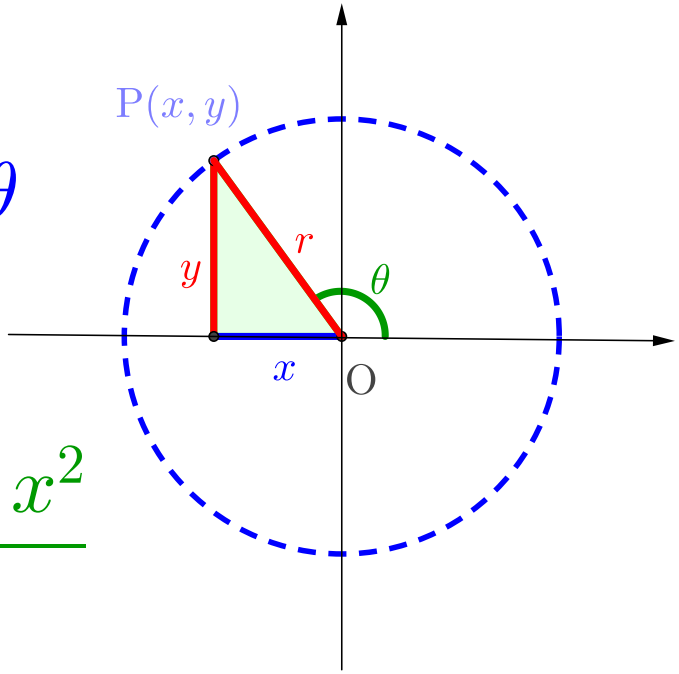


$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$

$$\sin^2\theta + \cos^2\theta$$

$$= \left(\frac{y}{r}\right)^2 + \left(\frac{x}{r}\right)^2 = \frac{y^2 + x^2}{r^2}$$

$$= \frac{r^2}{r^2}$$

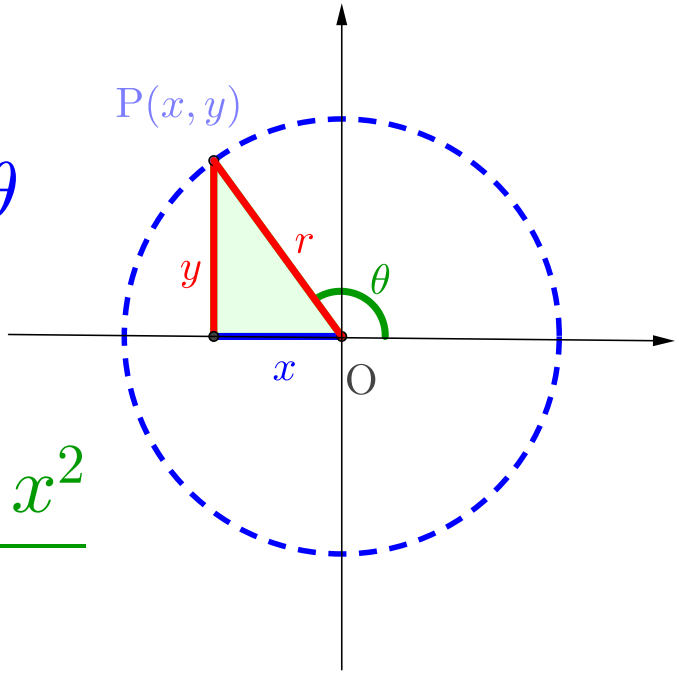


$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$

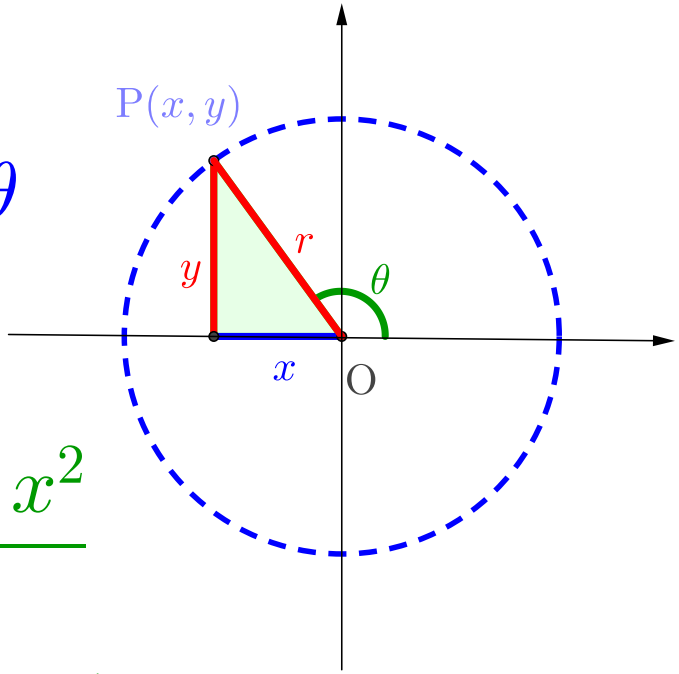
$$\sin^2\theta + \cos^2\theta$$

$$= \left(\frac{y}{r}\right)^2 + \left(\frac{x}{r}\right)^2 = \frac{y^2+x^2}{r^2}$$

$$= \frac{r^2}{r^2} = 1$$



$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$

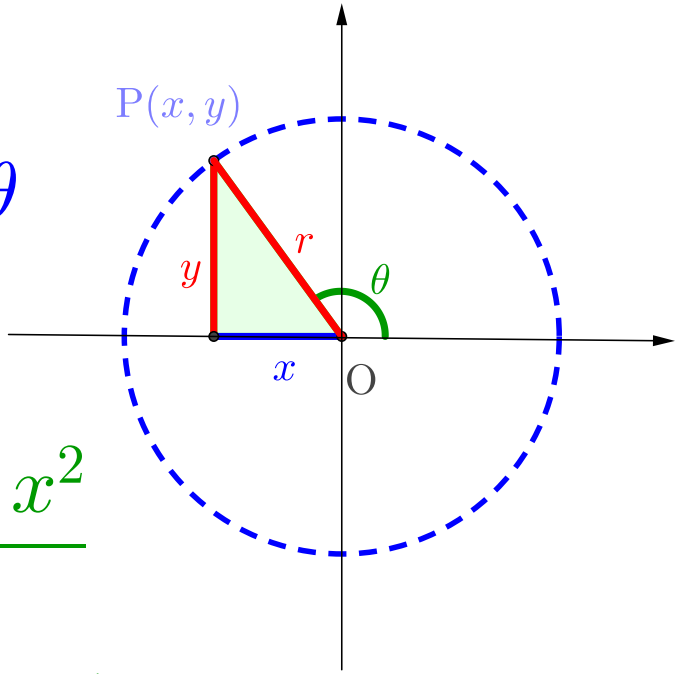


$$\sin^2\theta + \cos^2\theta$$

$$= \left(\frac{y}{r}\right)^2 + \left(\frac{x}{r}\right)^2 = \frac{y^2 + x^2}{r^2}$$

$$= \frac{r^2}{r^2} = 1 \quad \frac{\sin\theta}{\cos\theta} + 1 = \frac{1}{\cos\theta}$$

$$\frac{\sin\theta}{\cos\theta} = \frac{\frac{y}{r}}{\frac{x}{r}} = \frac{y}{x} = \tan\theta$$



$$\sin^2\theta + \cos^2\theta$$

$$= \left(\frac{y}{r}\right)^2 + \left(\frac{x}{r}\right)^2 = \frac{y^2 + x^2}{r^2}$$

$$= \frac{r^2}{r^2} = 1 \quad \frac{\sin\theta}{\cos\theta} + 1 = \frac{1}{\cos\theta}$$

$$\tan^2\theta + 1 = \sec^2\theta$$

Github:
https://min7014.github.io/math20220912002.html

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and you can see a picture moving.