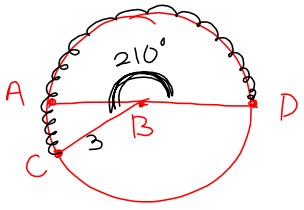
Bell Work

Multiply

$(x + 4)^2$

$(x - 7)^2$

15) $S = r\theta$ radians



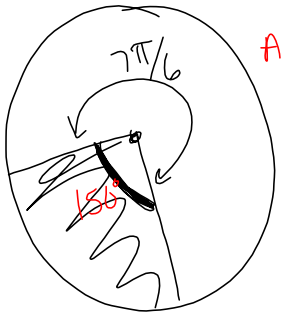
$\frac{210^\circ}{360^\circ} = \frac{7}{12}$

$C = 6\pi$

$\frac{7}{12}(6\pi)$

$\frac{7\pi}{2}$

16) $A = \frac{1}{2}r^2\theta$ ← radians



$\frac{150^\circ}{360^\circ} = \frac{5}{12}(\pi(15)^2)$

$\frac{1125\pi}{12}$

$\frac{375\pi}{4}$

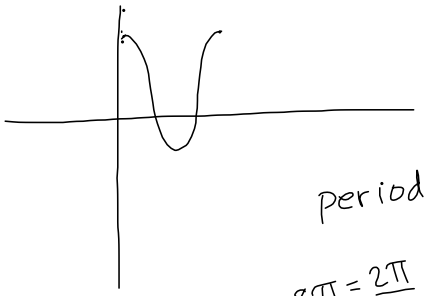
5)

$f(x) = 2\cos 1/4(x-\pi)$ Right π

~~$f(x) = 4\sin \frac{1}{2}(x+\pi)$~~

$f(x) = 2\sin\left(\frac{1}{4}x - \pi\right)$ Right 4π

~~$f(x) = 4\cos 2(x+\pi)$~~



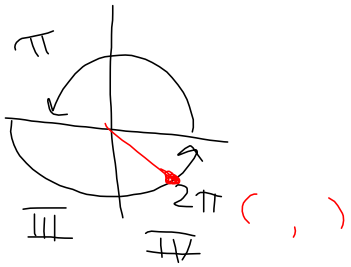
period $= 8\pi$

$8\pi = \frac{2\pi}{b}$

$b = \frac{2\pi}{8\pi}$

$b = 1/4$

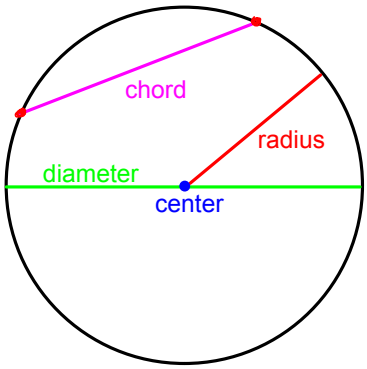
8) $\tan\theta = -1 \quad \pi \le \theta \le 2\pi$



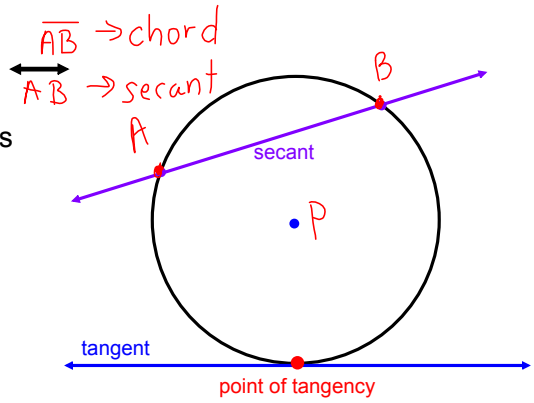
(,)

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

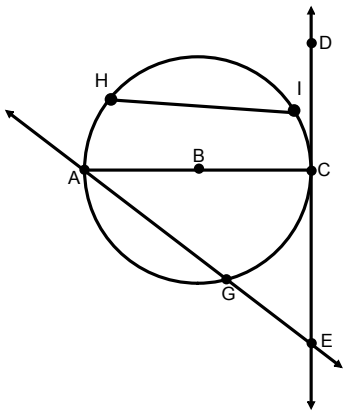
A **circle** is the set of all points in a plane that are equidistant from a given point called the **center** of the circle. A circle with center P is called "circle P" and can be written ⊙P. A segment whose endpoints are the center and any point on the circle is a **radius**.
A **chord** is a segment whose endpoints are on a circle.
A **diameter** is a chord that contains the center of the circle.



A **secant** is a line that intersects a circle in two points.
A **tangent** is a line in the plane of a circle that intersects the circle in exactly one point, the ***point of tangency***.

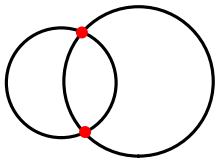


Tell whether the line, ray, segment is best described as a ***radius***, ***chord***, ***diameter***, ***secant***, or ***tangent*** of ⊙B.

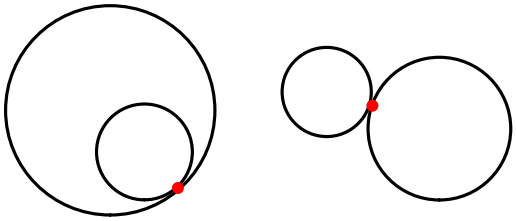


1. $\overline{AC}$ diameter
2. $\overline{AB}$ radius
3. $\overleftrightarrow{AG}$ Secant
4. $\overleftrightarrow{DE}$ tangent
5. $\overline{HI}$ chord
6. $\overrightarrow{CE}$ tangent

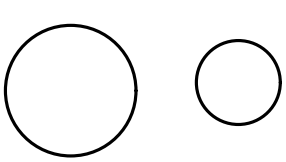
Coplanar circles can intersect in two points, one point or no points.

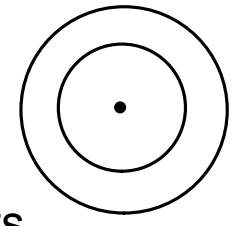


2 points



1 point

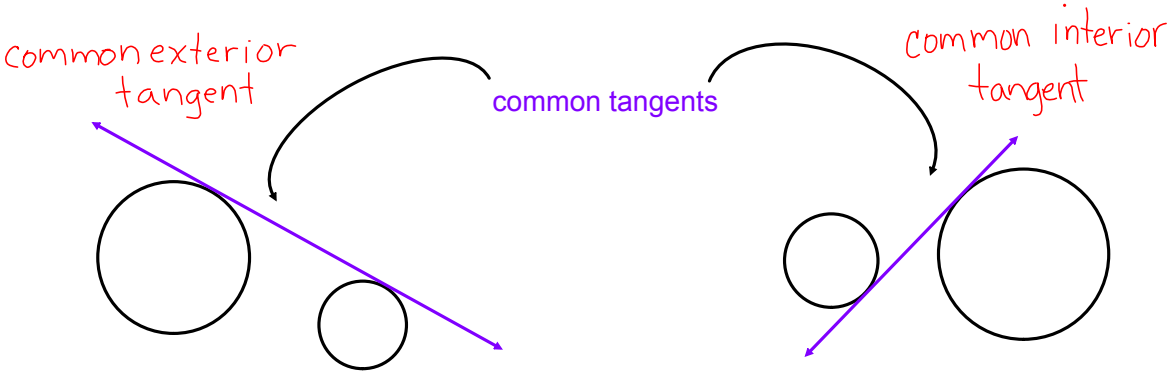




concentric circles

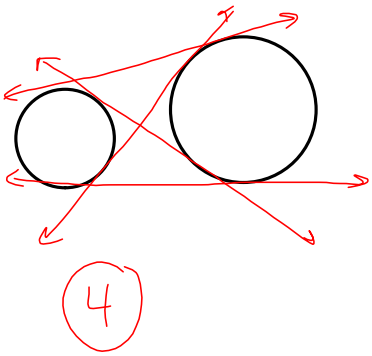
No points

COMMON TANGENTS: A line, ray, or segment that is tangent to two coplanar circles is called a common tangent.



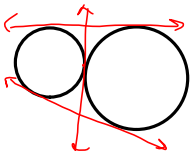
Tell how many common tangents the circles have and draw them.

a.



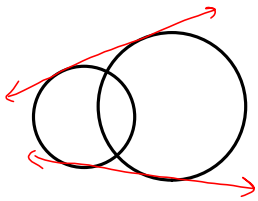
4

b.



3

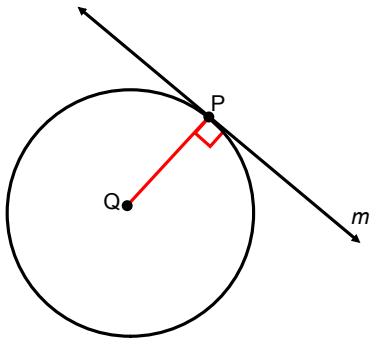
c.



2

Tangent lines are $\perp$ to the diameter of a circle at the point of tangency.

Line *m* is tangent to $\odot Q$ if and only if $m \perp \overline{QP}$.

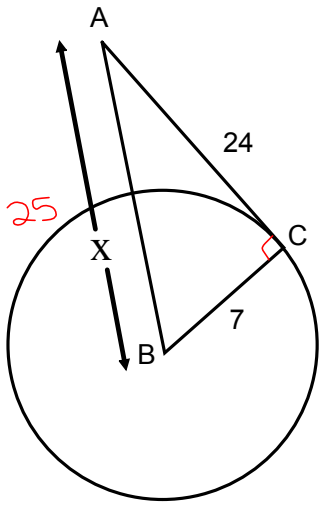


$\overline{AC}$ is tangent to ⊙B.

Find AB.

$x^2 = 7^2 + 24^2$

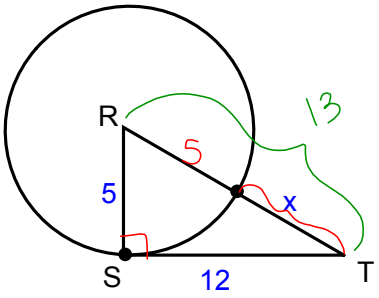
$x = 25$



$\overline{ST}$ is tangent to ⊙R.

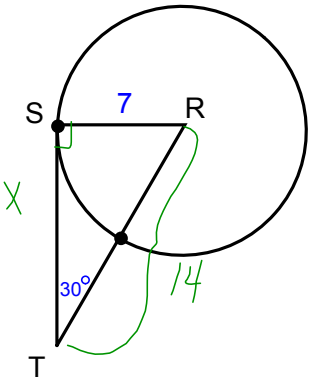
Find the value of x.

$x = 8$



$\overline{ST}$ is tangent to ⊙R.

Find ST.



$\tan 30° = \frac{7}{x}$

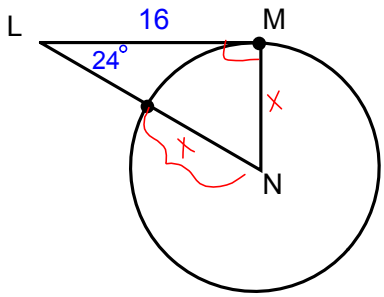
$x = \frac{7}{\tan 30°}$

$x = 12.12$

$7\sqrt{3} = x$

$\overline{LM}$ is tangent to ⊙N.

Find the radius of ⊙N.

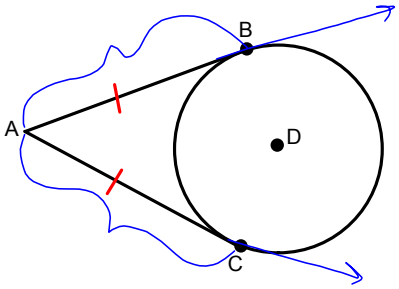


$\tan 24° = \frac{x}{16}$

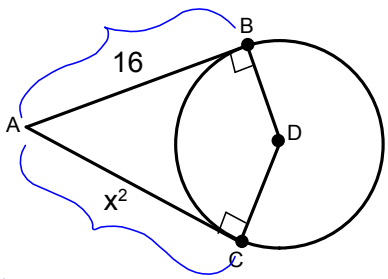
$16 \tan 24° = x$

$x = 7.12$

Tangent segments from a common external point are congruent.



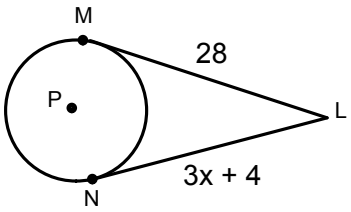
Find the value of x.



$X = 4$

$X = -4$

$\overline{ML}$ and $\overline{NL}$ are tangent to $\odot P$.



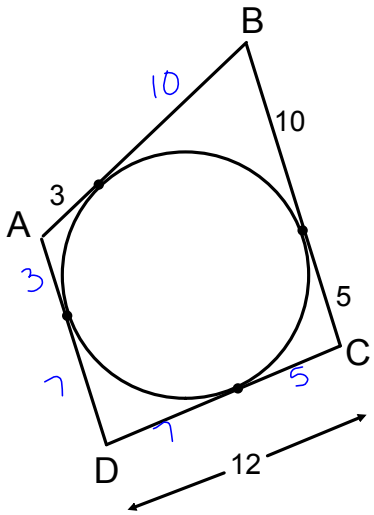
$3x + 4 = 28$

$-4 \quad -4$

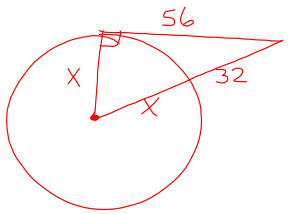
$\frac{3x}{3} = \frac{24}{3}$

$x = 8$

Find the perimeter of ABCD. = 50



25)



$x^2 + 56^2 = (x+32)^2$

$x^2 + 3136 = (x+32)(x+32)$

$x^2 + 3136 = x^2 + 64x + 1024$

$-x^2 \quad -x^2$

$3136 = 64x + 1024$

$-1024 \quad -1024$

$2112 = 64x$

$x = 33$