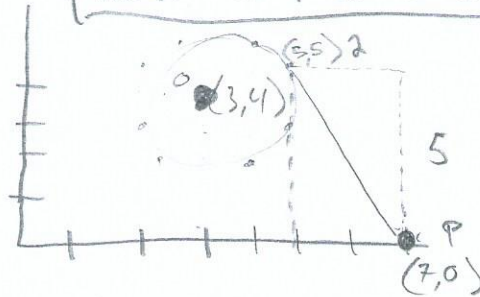


10. The center of circle O is located at $(3, 4)$ on the coordinate plane. The radius of circle O is $\sqrt{3}$ units. Point P is located at $(7, 0)$.

What is the length of \overline{PT} , the segment from point P that is tangent to circle O at point T ?

- A. $\sqrt{13}$ units
 B. $\sqrt{19}$ units
 C. $\sqrt{29}$ units
 D. $\sqrt{35}$ units



25 4

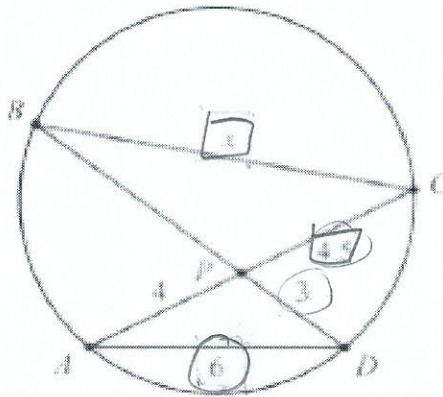
$$5^2 + 2^2 = ?^2$$

$$25 + 4 = ?^2$$

$$\sqrt{29} = ?^2$$

$$? = \sqrt{29}$$

11. Points $A, B, C,$ and D are on circle P as shown.



Use Ratios of like Pieces

$$\frac{3}{6} = \frac{4.5}{x}$$

cross multiply

$$3x = 27$$

$$\frac{3x}{3} = \frac{27}{3}$$

div. by 3

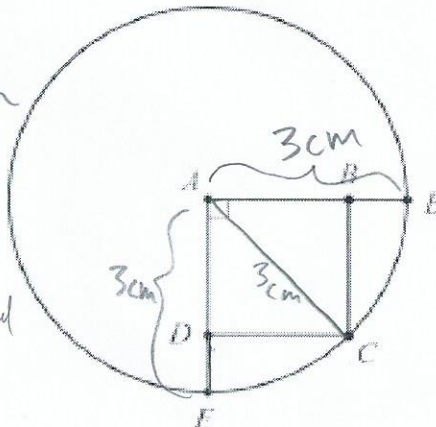
$$x = 9$$

What is the value of x ?

- A. 7.5
 B. 8
 C. 9
 D. 12

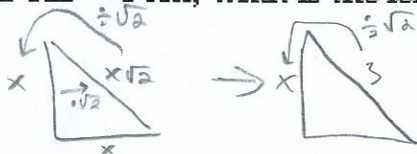
12. Quadrilateral $ABCD$ is a square in circle A .

If \overline{AE} is 3cm then \overline{AF} & \overline{AC} are also 3cm because both are radius. So $\triangle ADF$ is two 45-45-90 tri. Use special right triangles to find \overline{AD}



- A. $\sqrt{2}$
 B. $3 - 3\sqrt{2}$
 C. $\frac{3\sqrt{2}}{2}$
 D. $3 - \frac{3\sqrt{2}}{2}$

If $\overline{AE} = 3\text{cm}$, what is the length of \overline{DF} ?



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

rationalize denom

$$\frac{3}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{3\sqrt{2}}{2} = AD$$

So $\overline{DF} = \overline{AF} - \overline{AD}$

$$\overline{DF} = 3 - \frac{3\sqrt{2}}{2}$$