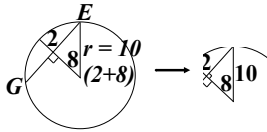
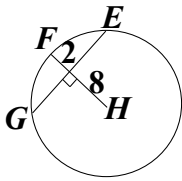
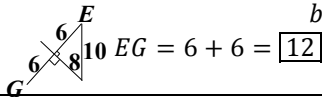


Pythagorean Theorem in Circles

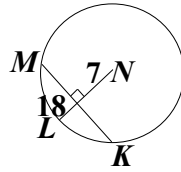
EXAMPLE $EG = ?$



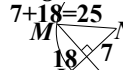
The radius makes a right triangle!
Use the Pythagorean Theorem.
 $a^2 + b^2 = c^2 \rightarrow 8^2 + b^2 = 10^2$
 $64 + b^2 = 100$
 $b^2 = 36$
 $\sqrt{b^2} = \sqrt{36}$
 $b = 6$



EXAMPLE $MK = ?$



The radius will create a right triangle.
Use the Pythagorean Theorem.



$$a^2 + b^2 = c^2 \rightarrow 7^2 + b^2 = 25^2$$

$$49 + b^2 = 625$$

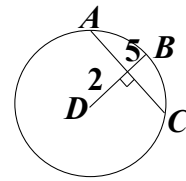
$$b^2 = 576$$

$$\sqrt{b^2} = \sqrt{576}$$

$$b = 24$$

$$MK = 24 + 24 = \boxed{48}$$

EXAMPLE $AC = ?$



The radius will create a right triangle.
Radius = $5 + 2 = 7$
Use the Pythagorean Theorem.

$$a^2 + b^2 = c^2 \rightarrow 2^2 + b^2 = 7^2$$

$$4 + b^2 = 49$$

$$b^2 = 45$$

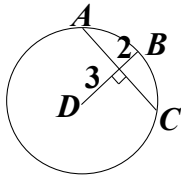
$$\sqrt{b^2} = \sqrt{45}$$

$$b = \sqrt{9\sqrt{5}}$$

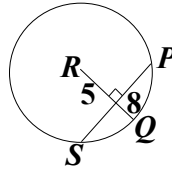
$$b = 3\sqrt{5}$$

$$AC = 3\sqrt{5} + 3\sqrt{5} = \boxed{6\sqrt{5}}$$

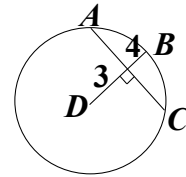
1. $AC = ?$



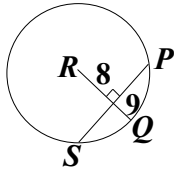
2. $PS = ?$



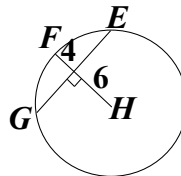
3. $AC = ?$



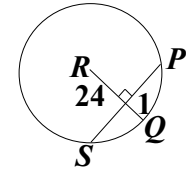
4. $PS = ?$



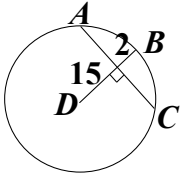
5. $EG = ?$



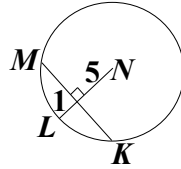
6. $PS = ?$



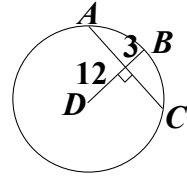
7. $AC = ?$



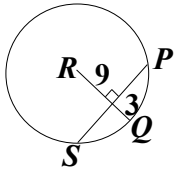
8. $MK = ?$



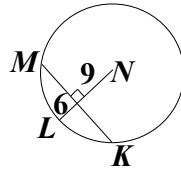
9. $AC = ?$



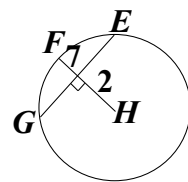
10. $PS = ?$



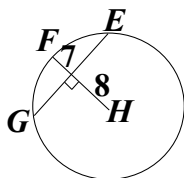
11. $MK = ?$



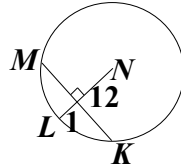
12. $EG = ?$



13. $EG = ?$



14. $MK = ?$



15. $EG = ?$

