2. 

## Given:

○P
$\overline{\mathbf{P Q}} \cong \overline{\mathbf{R P}}$
$A B=6 x+14$
$C D=4-4 x$
Find: AB

5.

Given: ○P
$P$ is the midpoint of $\overline{M N}$ $\overline{\mathbf{M N}} \perp \overline{\mathbf{A D}} ; \overline{\mathbf{M N}} \perp \overline{\mathbf{B C}}$

Prove: $A B C D$ is a parallelogram

6.

A fly is sitting at the midpoint of a wooden chord of a circular wheel. The wheel has a radius of 10 cm , and the chord has a length of 12 cm .
a. How far from the hub (center) is the fly?
b. The wheel is spun. What is the path of the fly?

9.

Given: ©F
$\overline{\mathrm{FE}} \perp \overline{\mathrm{BC}}, \overline{\mathrm{FD}} \perp \overline{\mathrm{AB}}$ $\overrightarrow{B F}$ bisects $\angle A B C$

Prove: $\overline{\mathrm{BC}} \cong \overline{\mathrm{BA}}$


Statements
Reasons
10.

Given: ©F
$\overline{\mathrm{FE}} \perp \overline{\mathrm{AC}}, \overline{\mathrm{DF}} \perp \overline{\mathrm{AB}}$ $\overline{\mathbf{A C}} \cong \overline{\mathbf{A B}}$

Prove: $\triangle A D E$ is isosceles


Statements
Reasons
11.
a. Find $A B$
b. Find the radius of $\odot 0$

12.

A regular hexagon with perimeter of 24 is inscribed in a circle. How far from the center is each side?
13.

A 16-by-12 rectangle is inscribed in a circle. Find the radius of the circle.
15.

Given: $\triangle A B C$ is isosceles with $\overline{A B} \cong \overline{A C}$ -
$\overline{\mathrm{AD}} \perp \overline{\mathrm{BC}}, \overline{\mathrm{EF}} \perp \overline{\mathrm{AC}}$

Find: a. The radius of the circle

b. The perimeter of $\triangle A B C$

