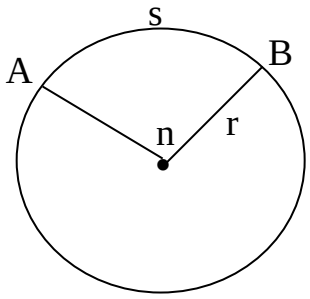
Arc Length and Circumference of Circles HW

Formula for arc length: $S = \frac{n}{360} \cdot C$ (C = circumference) *or*

$S = \frac{n}{360} \cdot 2\pi r$ (when given radius) *or* $S = \frac{n}{360} \pi d$ (when given diameter)

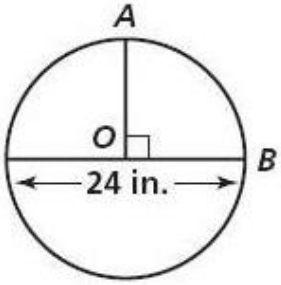
where: S – arc length
r – radius of a circle
n – degrees in a central angle



I can calculate the circumference AND an arc length of a circle. Shade in the given arc before calculating.

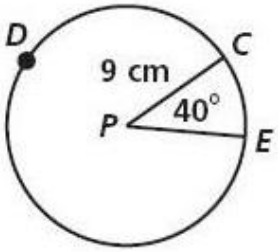
Find the arc length and circumference for each question. KEEP ALL ANSWERS IN TERMS OF PI.

1. $\overset{\frown}{AB}$



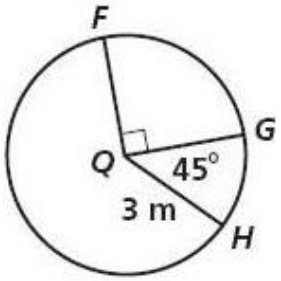
C = _____ Length= _____

2. $\overset{\frown}{CDE}$



C = _____ Length= _____

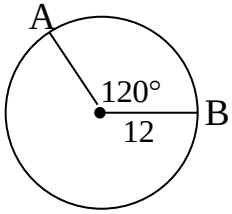
3. $\overset{\frown}{FH}$



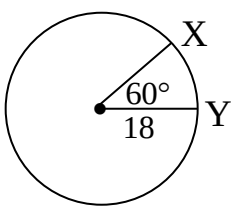
C = _____ Length= _____

Directions: Follow the given instructions below.

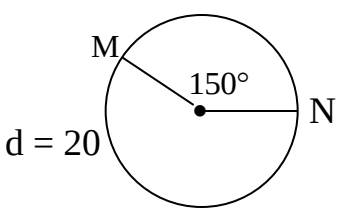
4. Find m $\overset{\frown}{AB}$.



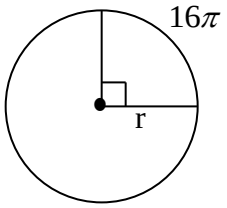
5. Find m $\overset{\frown}{XY}$.



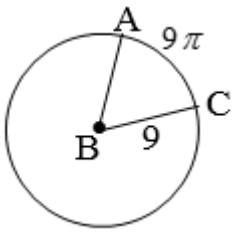
6. Find m $\overset{\frown}{MN}$.



7. Find the radius.

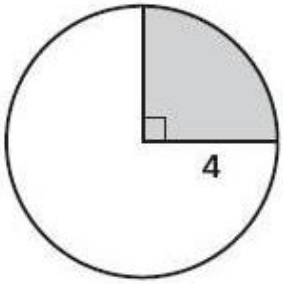


8. Find $m\angle ABC$.



Find the arc length of the given arc below. Keep your answers in terms of pi.

9.



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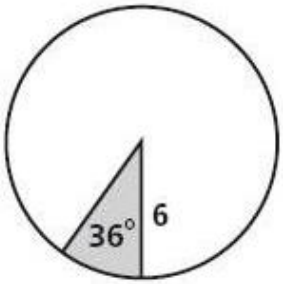

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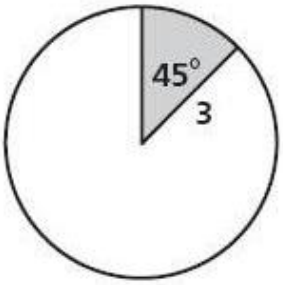

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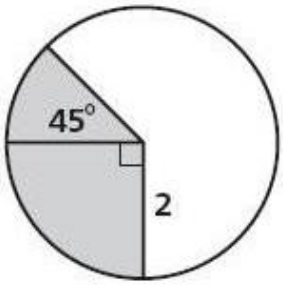

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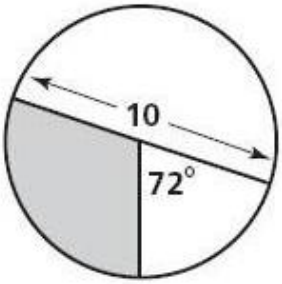

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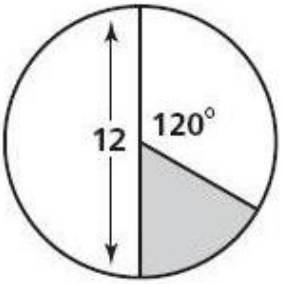

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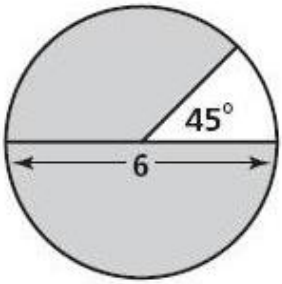

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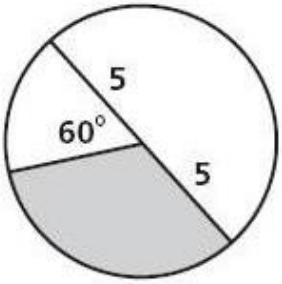
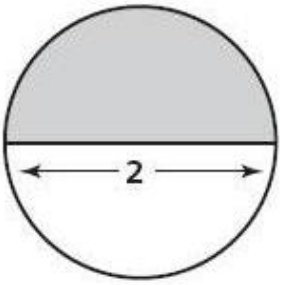
17.