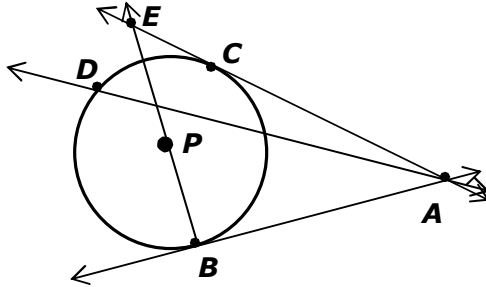


Geometry

(G.9) Congruence and the geometry of size. The student analyzes properties and describes relationships in geometric figures. The student is expected to: (C) formulate and test conjectures about the properties and attributes of circles and the lines that intersect them based on explorations and concrete models.

G.9C Mini-Assessment

1. Which of the following appear to be tangent lines of circle P ?



- A \overline{AB} and \overline{AD}
- B \overline{AB} and \overline{BE}
- C \overline{BE} and \overline{AC}
- D \overline{AB} and \overline{AC}

2. Which of the following properties must be true for a polygon inscribed in a circle?

- I. The vertices of the polygon will be points on the circle
- II. The sides of the polygon will be chords of the circle
- III. The sides of the polygon will be tangent to the circle.

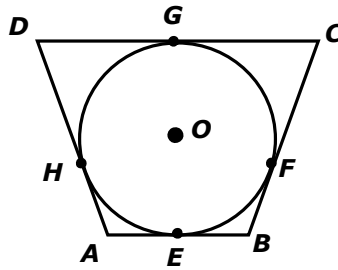
- F I only
- G I and II only
- H III only
- J I, II, and III

Geometry

(G.9) Congruence and the geometry of size. The student analyzes properties and describes relationships in geometric figures.

The student is expected to: (C) formulate and test conjectures about the properties and attributes of circles and the lines that intersect them based on explorations and concrete models.

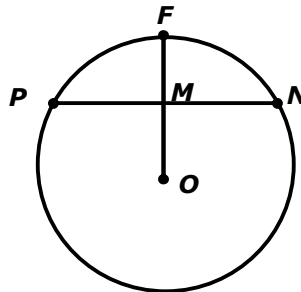
3. Trapezoid $ABCD$ is circumscribed about circle O .



$AE = 5$, $DG = 6$, $CF = 6$, $FB = 5$. What is the perimeter of the trapezoid?

- A** 22
- B** 42
- C** 45
- D** 44

4. In $\odot O$, $\overline{FO} \perp \overline{PN}$. If $\odot O$ has a diameter of 14 units and $FM = 3$ units, which is closest to the length of \overline{PN} ?



- F** 14 units
- G** 5.7 units
- H** 11.5 units
- J** 10 units

Geometry

(G.9) Congruence and the geometry of size. The student analyzes properties and describes relationships in geometric figures.

The student is expected to: (C) formulate and test conjectures about the properties and attributes of circles and the lines that intersect them based on explorations and concrete models.

5. A circle has a center at point $(-1, 6)$. A radius has endpoint $(5, 8)$. What is the slope of the tangent line at point $(5, 8)$?

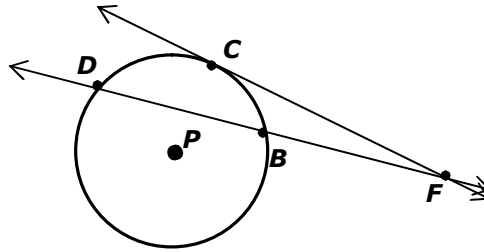
A -3

C 3

B $-\frac{1}{3}$

D $\frac{1}{3}$

6. \overline{FC} is a tangent line with tangent point C . \overline{FD} is a secant line.



If $FC = 10\sqrt{2}$ and $FB = BD$, determine the value of FD .

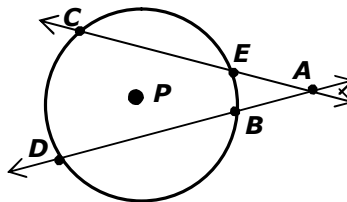
F 15

H 10

G 20

J 12

7. \overline{AD} and \overline{AC} are secant lines for circle P .



Which of the following statements is correct?

A $AE \times CE = AB \times DB$

B $AC \times CE = AD \times DB$

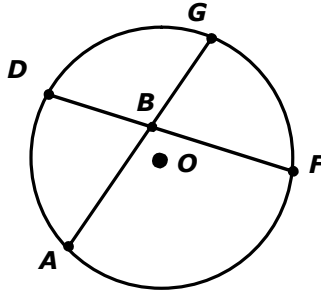
C $AE \times AC = AB \times AD$

D $AE \times AC = AB \times DB$

Geometry

(G.9) Congruence and the geometry of size. The student analyzes properties and describes relationships in geometric figures. The student is expected to: (C) formulate and test conjectures about the properties and attributes of circles and the lines that intersect them based on explorations and concrete models.

8. Given: Circle O with chords \overline{DF} and \overline{AG} .



If $AB = 15$, $BG = 6$, and $DB = 5$, what is the value of BF ?

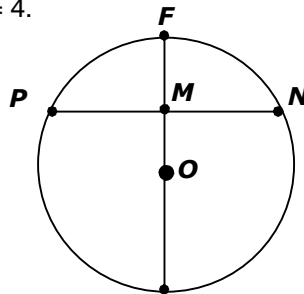
F 21

H 14

G 15

J 18

9. In circle O , the diameter is 14 units, and $FM = 4$.



If \overline{PM} and \overline{MN} are congruent segments of chord \overline{PN} , which is closest to the length of \overline{PN} ?

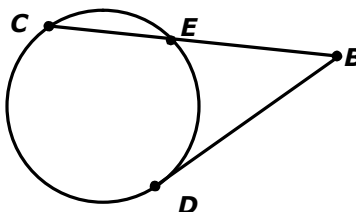
A 12.6

C 11.5

B 9.3

D 6.3

10. \overline{BD} is a tangent segment with tangent point D . \overline{BC} is a secant segment.



If $CE = 5$ and $EB = 9$, what is the approximate length of the tangent segment?

F 14

H 6.7

G 11.2

J 8.4