G.C.A.2: Chords, Secants and Tangents 15
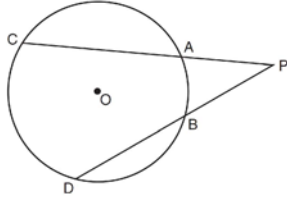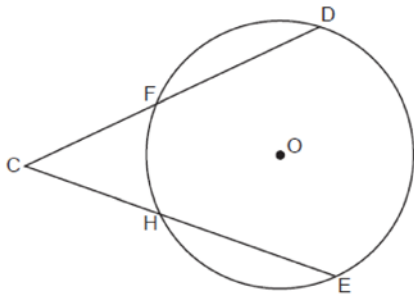
1 In the diagram below of circle O, $\overline{PAC}$ and $\overline{PBD}$ are secants.

If $m\overset{\frown}{CD} = 70$ and $m\overset{\frown}{AB} = 20$, what is the degree measure of $\angle P$?
1) 25
2) 35
3) 45
4) 50

2 In the diagram below of circle O, secants $\overline{CFD}$ and $\overline{CHE}$ are drawn from external point C.
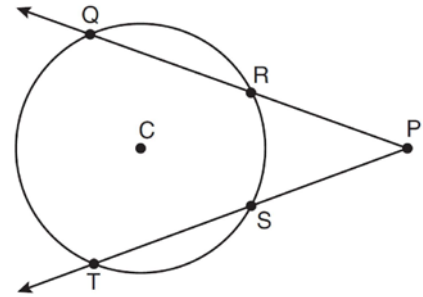

If $m\overset{\frown}{DE} = 136°$ and $m\angle C = 44°$, then $m\overset{\frown}{FH}$ is
1) 46°
2) 48°
3) 68°
4) 88°

3 In circle O two secants, $\overline{ABP}$ and $\overline{CDP}$, are drawn to external point P. If $m\overset{\frown}{AC} = 72°$, and $m\overset{\frown}{BD} = 34°$, what is the measure of $\angle L$?
1) 19°
2) 38°
3) 53°
4) 106°

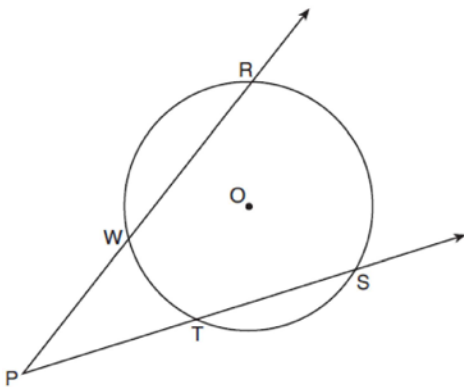4 In the diagram below of circle C, $m\overset{\frown}{QT} = 140$, and $m\angle P = 40$.

What is $m\overset{\frown}{RS}$?
1) 50
2) 60
3) 90
4) 110

5   In the accompanying diagram, $\overline{PBA}$ and $\overline{PCD}$ are secants to the circle. If $m\angle P = 40$ and $m\overset{\frown}{AD} = 120$, find $m\overset{\frown}{BC}$.
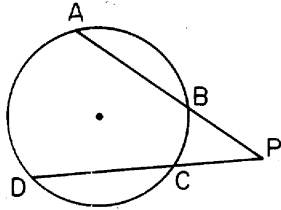
6   As shown in the diagram below, secants $\overrightarrow{PWR}$ and $\overrightarrow{PTS}$ are drawn to circle O from external point P.

If $m\angle RPS = 35°$ and $m\overset{\frown}{RS} = 121°$, determine and state $m\overset{\frown}{WT}$.

G.C.A.2: Chords, Secants and Tangents 15
Answer Section

1 ANS: 1

$$\frac{70 - 20}{2} = 25$$

REF: 011325ge
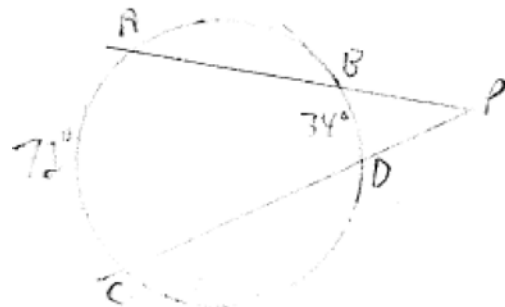
2 ANS: 2

$$\frac{136 - x}{2} = 44$$

$$136 - x = 88$$

$$48 = x$$

REF: 012414geo

3 ANS: 1

$$\frac{72 - 34}{2} = 19$$

REF: 061918geo

4 ANS: 2

$$\frac{140 - \overline{RS}}{2} = 40$$

$$140 - \overline{RS} = 80$$

$$\overline{RS} = 60$$

REF: 081025ge

5 ANS:

40

REF: 088910siii

6 ANS:

$$\frac{121 - x}{2} = 35$$

$$121 - x = 70$$

$$x = 51$$

REF: 011927geo