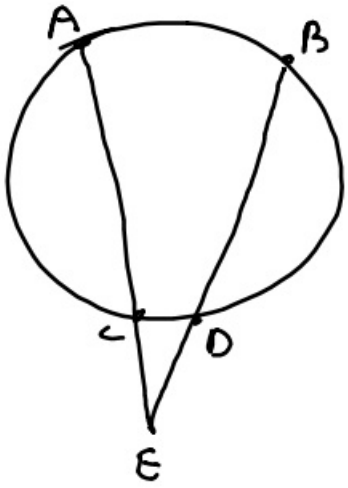
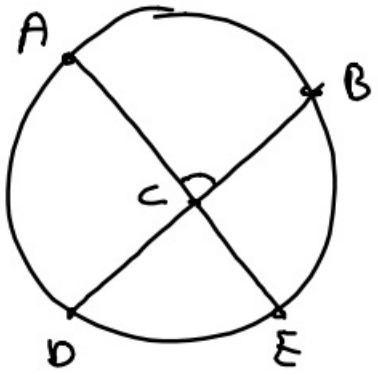
2-1-18 5th Geo

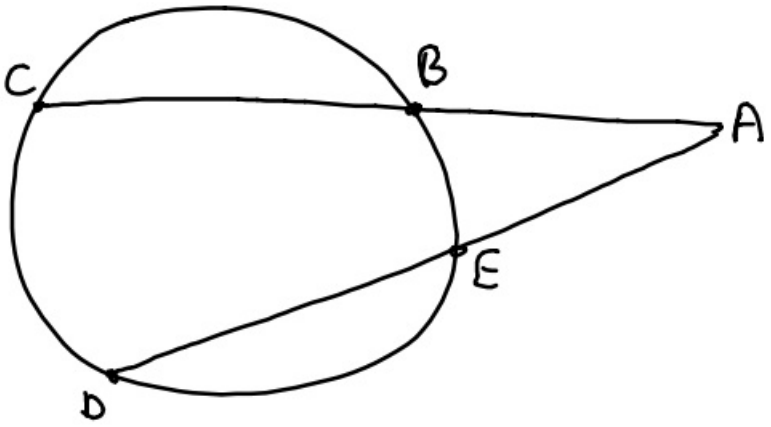


$\angle E = \frac{1}{2}(\overset{\frown}{AB} - \overset{\frown}{CD})$



$\angle ACB = \frac{1}{2}(\overset{\frown}{AB} + \overset{\frown}{DE})$

(1)



$\angle A = 42^\circ \quad \overset{\frown}{CD} = 120^\circ \quad \overset{\frown}{BE} = ?$

$\angle A = \frac{1}{2}(\overset{\frown}{CD} - \overset{\frown}{BE})$

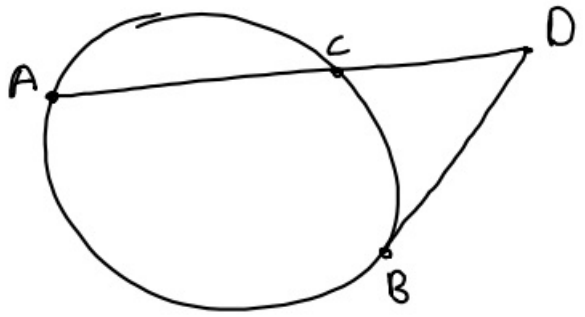
$2 \cdot 42 = 2 \cdot \frac{1}{2}(120 - \overset{\frown}{BE})$

$84 = 120 - \overset{\frown}{BE}$

$-120 \quad -120$

$-36 = -\overset{\frown}{BE}$

$\therefore \overset{\frown}{BE} = 36^\circ$

② 

$\angle D = 62^\circ \quad \overset{\frown}{CB} = 70^\circ \quad \overset{\frown}{AB} = ?$

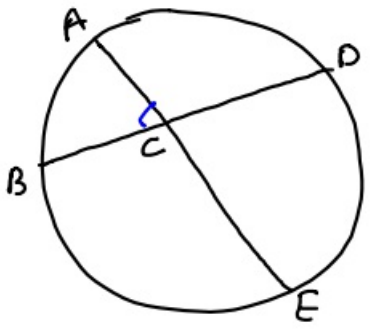
$\angle D = \frac{1}{2}(\overset{\frown}{AB} - \overset{\frown}{CB})$

$2 \cdot 62 = 2 \cdot \frac{1}{2}(\overset{\frown}{AB} - 70)$

$124 = \overset{\frown}{AB} - 70$

$+70 \qquad +70$

$194 = \overset{\frown}{AB}$

③ 

$\angle ACB = 71^\circ$

$\overset{\frown}{AB} = 60$

$\overset{\frown}{DE} = ?$

$\angle ACB = \frac{1}{2}(\overset{\frown}{AB} + \overset{\frown}{DE})$

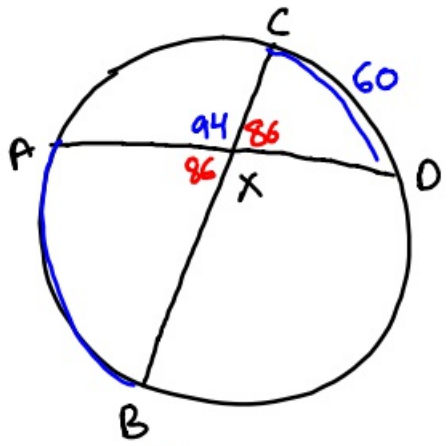
$2 \cdot 71 = 2 \cdot \frac{1}{2}(60 + \overset{\frown}{DE})$

$142 = 60 + \overset{\frown}{DE}$

$-60 \quad -60$

$82 = \overset{\frown}{DE}$

(4)



$\angle AXC = 94^\circ$

$\overset{\frown}{CD} = 60^\circ$

$\overset{\frown}{AB} = ?$

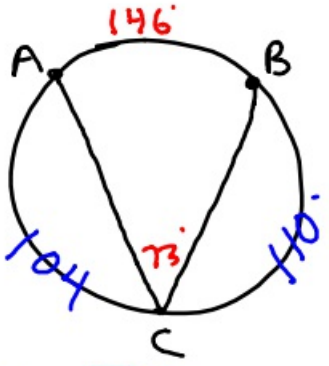
$2 \cdot 86^\circ \overset{2\cdot}{=} \frac{1}{2}(60 + \overset{\frown}{AB})$

$172 = 60 + \overset{\frown}{AB}$

$-60 \quad -60$

$112 = \overset{\frown}{AB}$

(5)

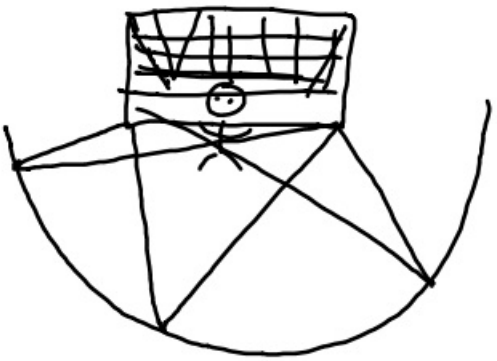


$360 - 104 - 110 = \boxed{146^\circ}$

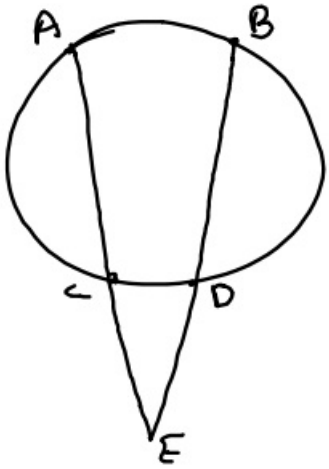
$\overset{\frown}{AC} = 104$

$\overset{\frown}{BC} = 110$

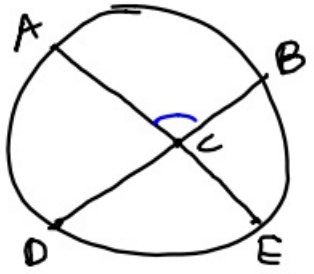
$\angle ACB = ?$ 73°



2-1-18 6th Geo

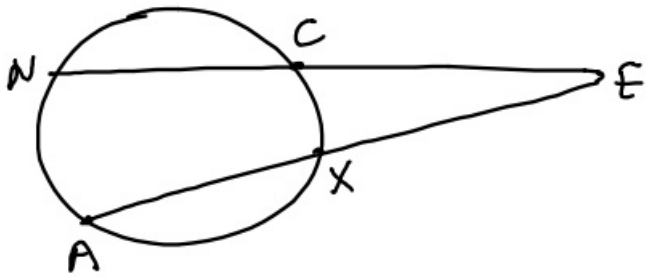


$\angle E = \frac{1}{2}(\overset{\frown}{AB} - \overset{\frown}{CD})$



$\angle ACB = \frac{1}{2}(\overset{\frown}{AB} + \overset{\frown}{DE})$

(1)



$\overset{\frown}{CX} = 44^\circ \quad \angle E = 58^\circ \quad \overset{\frown}{NA} = ?$

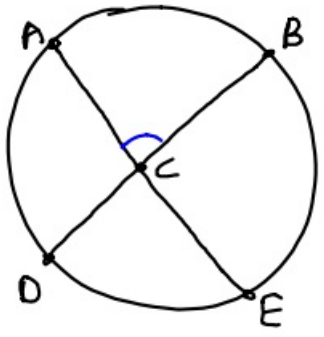
$\angle E = \frac{1}{2}(\overset{\frown}{NA} - \overset{\frown}{CX})$

$2 \cdot 58^\circ = 2 \cdot \frac{1}{2}(\overset{\frown}{NA} - 44)$

$116 = \overset{\frown}{NA} - 44$

$+44 \qquad +44$

$160 = \overset{\frown}{NA}$

② 

$\angle ACB = 71°$

$\overset{\frown}{AB} = 60°$

$\overset{\frown}{DE} = ?$

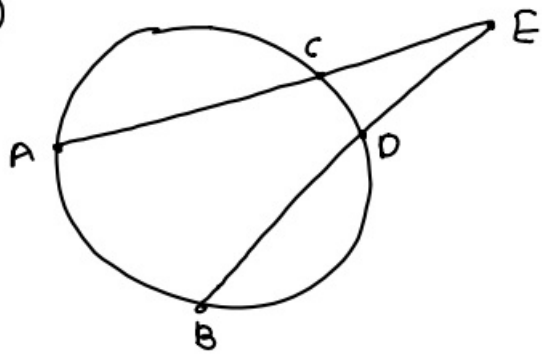
$\angle ACB = \frac{1}{2}(\overset{\frown}{AB} + \overset{\frown}{DE})$

$2 \cdot 71 = 2 \cdot \frac{1}{2}(60 + \overset{\frown}{DE})$

$142 = 60 + \overset{\frown}{DE}$

$-60 \quad -60$

$82 = \overset{\frown}{DE}$

③ 

$\overset{\frown}{AB} = 107° \quad \angle E = 58° \quad \overset{\frown}{CD} = ?$

$\angle E = \frac{1}{2}(\overset{\frown}{AB} - \overset{\frown}{CD})$

$2 \cdot 58 = 2 \cdot \frac{1}{2}(107 - \overset{\frown}{CD})$

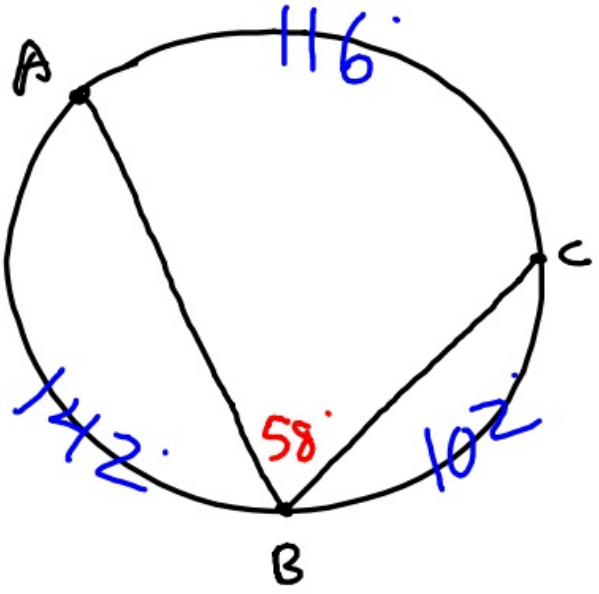
$116 = 107 - \overset{\frown}{CD}$

$-107 \quad -107$

$9 = -\overset{\frown}{CD}$

$\therefore \overset{\frown}{CD} = -9°$ ← Not possible

(4)

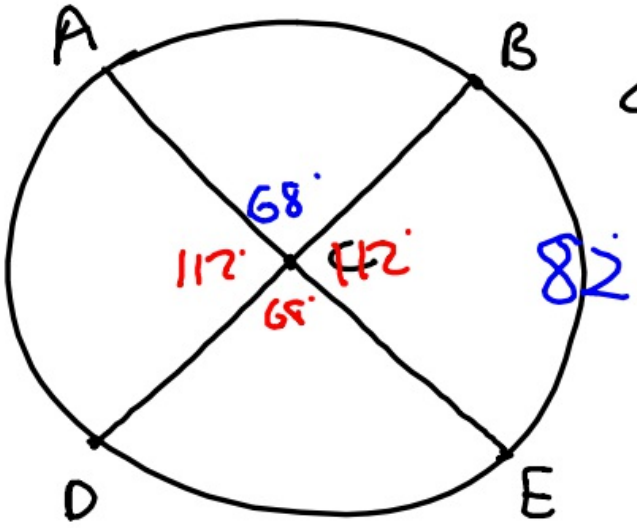


$\overset{\frown}{AB} = 142°$

$\overset{\frown}{BC} = 102°$

$\angle ABC = ?$

(5)



$\angle ACB = 68°$

$\overset{\frown}{BE} = 82°$

$\overset{\frown}{AD} = ?$

$2 \cdot 112 = 2 \cdot \frac{1}{2}(82 + \overset{\frown}{AD})$

$224 = 82 + \overset{\frown}{AD}$

$-82 \quad -82$

$142° = \overset{\frown}{AD}$