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1. a) $x = 2.1$ b) $x = 3.8$ c) $x = 48.6^\circ$
 d) $x = 59^\circ$ e) $x = 3.5$ f) $x = 20.3^\circ$

2. $m\angle B = 65^\circ$
 $\overline{mAB} = 7.5\text{cm}$
 $\overline{mAC} = 9.6\text{cm}$

3. $m\angle B = 52.5^\circ$
 $m\angle C = 62.5^\circ$
 $\overline{mAB} = 7.8\text{cm}$

4. $m\angle A = 131.4^\circ$

5. $33m$

6. a) $\overline{mAC}_1 = 9.9$; $m\angle A_1 = 80^\circ$; $m\angle B_1 = 76.8^\circ$
 $\overline{mAC}_2 = 8.5$; $m\angle A_2 = 100^\circ$; $m\angle B_2 = 56.8^\circ$
 b) $\angle BAC_1$ and $\angle BAC_2$ are supplementary angles

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7. Case1: $m\angle A = 60^\circ$; $m\angle B = 89^\circ$; $\overline{mAC} = 11.5$
 Case 2: $m\angle A = 120^\circ$; $m\angle B = 29^\circ$; $\overline{mAC} = 5.6$

8. $m\angle CBE = 13^\circ$

9. $a = 50cm$
 $b = 60cm$
 $c = 43cm$

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10. a) $x = 5.3$ b) $x = 6.1$ c) $x = 11.8$
d) $x = 44.4^\circ$ e) $x = 125.1^\circ$ f) $x = 41.4^\circ$

11. $m\overline{BC} = 3.35$
 $m\angle B = 77.8^\circ$
 $m\angle C = 47.2^\circ$

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12. $m\angle A = 36.3^\circ$ 16. $m\angle ADC = 126^\circ$
 $m\angle B = 26.4^\circ$
 $m\angle C = 117.3^\circ$
13. $m\overline{AB} = 6cm$ 17. $m\overline{BC} = 7.4cm$
14. $255m$ 18. $m\angle CBE = 64^\circ$
15. $m\overline{AC} = 7.19cm$