Workbook

P. 190

#1 a) $x = 6$ b) $x = 10$ c) $x = 6$

d) $x = 7$ e) $x = 6$ f) $x = 6$

P. 191

#2 a) $x = 146°$ b) $x = 115°$ c) $x = 25°$

d) $x = 52°$ e) $x = 10°$ f) $x = 43°$

#3 a) $\overline{AH}$
b) $\overline{AM}$
c) $The\ right\ bisector\ of\ \overline{BC}$
d) $The\ bisector\ of\ angle\ B$
e) $30°$

#4 $m\angle ABC = m\angle ACB = 60°, since\ triangle\ ABC\ is\ equilateral.$
$m\angle OBC = m\angle OCB = 30°, since\ \overline{BO}\ and\ \overline{CO}\ are\ bisectors\ of\ angles\ B\ and\ C.$
$m\angle OBC + m\angle OCB + m\angle BOC = 180°, since\ the\ sum\ of\ interior\ angles\ of\ a\ triangle\ is\ 180°$
$m\angle BOC + 60° = 180°\ (substitution)$
$m\angle BOC = 120°$

P. 192

#5 a) 1. $\Delta AOB\ is\ isosceles\ since\ \overline{OA}\ and\ \overline{OB}\ are\ radii$
2. $\Delta AOC\ is\ isosceles\ since\ \overline{OA}\ and\ \overline{OC}\ are\ radii$
3. $The\ sum\ of\ the\ interior\ angles\ of\ \Delta ABC\ is\ 180°$
4. $x + y\ represents\ the\ measure\ of\ \angle BAC$

b) $Since\ O\ is\ the\ centre\ of\ the\ circle, we\ have\ m\ \overline{OA} = m\ \overline{OB} = \overline{OC}.$
$Since\ O\ is\ the\ midpoint\ of\ the\ hypotenuse\ BC, the\ point\ O\ is\ therefore\ equidistant\ to\ all\ three\ vertices$

#6 $m\angle A = 60°$