# *HW: p.14#1, 2, 4 - 6, 8 - 9, 10c,11-17, 19, 20, 23*

**Pages 14–17 (Section 1.2)**

**1** **a** 61° 40' **b** 71° 42' **2** **a** $132\frac{1}{2}°$ **b** $19\frac{3}{4}°$

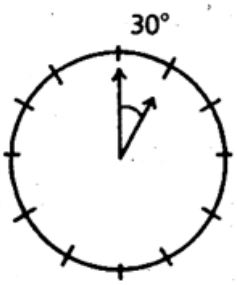
**3** $\angle 1$ and $\angle 2$ **4** **a** T **b** $\overline{VW}$ **c** $\overleftarrow{PR}$ **d** $\angle QSR$ **e** 6

**5** **a** 87° 10" **b** 82° 49' **6** **a** right angle = 90°, 90° – 60° = 30°

**b** 90° – 70° = 20° **c** 180° – 50° = 130° **d** obtuse **7** **a** $\angle 5$

**b** same size **c** $\angle 4$ **8** $(x + 10)° = 60°$ so $x = 50°$, $x + 5° = 55°$

**9**




We know this because $12 \times 30° = 360°$ and there are 360° in a circle

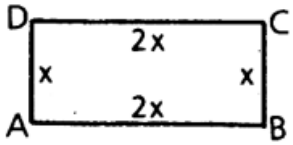
**a** 90° **b** 45° **c** 100° **d** $142\frac{1}{2}°$

**10** **a** 5 **b** PQ = 5, QR = 4 **c** 8

**11** $90° - 37°\ 66'\ 10" = 51°\ 53'\ 50"$

**12** **a** 8 **b** 2 **c** 10 **d** 4 **e** $\angle AEC, \angle BED$

**13**




$2x + 2(2x) = 66$

$6x = 66,\ x = 11,\ 2x = 22$

**14**

$2r + 5 = 3\frac{1}{2}r + 2$

$5 = 1\frac{1}{2}r + 2$

$3 = 1\frac{1}{2}r$

$r = 2$

$3m + 7 = 4.2m + 5$

$-7 = 1.2m + 5$

$2 = 1.2m$

$m = \frac{5}{3}$

**15** $y = x + 17$ **16** $x = m\angle COA$, $3x = m\angle POC$ then $x + 3x = 90$,
$x = 22\frac{1}{2}$, $m\angle POC = 67\frac{1}{2}$

**17** **a** $0 < m\angle P < 90$ **b** $20 < x < 50$ **18 a** 3 **b** 4

**19**

$$\frac{3x}{2} + 2 = 2x - 29\frac{1}{4}$$
$$-\frac{1}{2}x = -31\frac{1}{4}$$
$$x = 62\frac{1}{2}$$

$m\angle ABC$ and $m\angle CBD = 95\frac{3}{4}$, no

**20** $\frac{2}{9}(60) = \frac{120}{9} = 13\frac{1}{3}$; $\frac{1}{3}(60) = 20$

15° 13' 20"

**21** $-2(3x + 3y = 90)$ $\quad -6x - 6y = -180$

$3(2x + 5y = 180)$ $\quad \underline{6x + 15y = 540}$

$9y = 360$

$y = 40$

$x = -10$

**22** * = XLr8r # = YBcaws

$3* + 2\# = 90$ $\quad 3* + 2\# = 90$

$3* + 1\# = 60$ $\quad \underline{-3* - 1\# = -60}$

$\# = 30$

$3*$ or $3XLr8r = 30$, $XLr8r = 10°$

**23** $72 + \frac{22}{60} + \frac{30}{3600} = 72 + \frac{44}{120} + \frac{1}{120}$

$= 72\frac{45}{120}$ or $72\frac{3}{8}°$