

Lesson 4.5

Homework Answers

p. 213 #1, 2, 7-18, 21-26, 31, 34-38, 40, 41, 46-50

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| 1) a) \overline{RS} b) \overline{RS} c) Given d) Defn. of \angle bisector e) Reflexive POC f) AAS | 25) $x = 64; y = 71$ |
| 2) a) \overline{KM} b) \overline{KM} c) By construction d) Defn. of segment bisector e) Reflexive POC f) SSS g) CPCTC | 26) $x = 30; y = 120$ |
| 7) $x = 80; y = 40$ | 31) 45; they are = and have sum 90. |
| 8) $x = 40; y = 70$ | 34) $m = 36; n = 27$ |
| 9) $x = 38; y = 4$ | 35) $m = 60; n = 30$ |
| 10) $x = 4\frac{1}{2}; y = 60$ | 36) $m = 20; n = 45$ |
| 11) $x = 36; y = 36$ | 37) (0, 0), (4, 4), (-4, 0), (0, -4), (8, 4), (4, 8) |
| 12) $x = 92; y = 7$ | 38) (5, 0); (0, 5); (-5, 5); (5, -5); (0, 10); (10, 0) |
| 13) 64 | 40) a) 25 b) 40; 40; 100 c) Obtuse isosc. Δ ; 2 of the \angle 's are \cong and one \angle is obtuse |
| 14) $2\frac{1}{2}$ | 41) $\overline{AC} \cong \overline{CB}$ and $\angle ACD \cong \angle DCB$ (given) $\overline{CD} \cong \overline{CD}$ (Reflexive POC) $\triangle ACD \cong \triangle DCB$ (SAS) $\overline{AD} \cong \overline{BD}$ (CPCTC) and \overline{CD} bisects \overline{AB} . Also $\angle ADC \cong \angle CDB$ (CPCTC), $m\angle ADC + m\angle CDB = 180$ (\angle add post), so $m\angle ADC = m\angle CDB = 90$ (Subst. POC) So \overline{CD} is the \perp bisector of \overline{AB} |
| 15) 42 | 46) C |
| 16) 35 | 47) G |
| 17) 150; 15 | 48) D |
| 18) 24, 48, 72, 96, 120 | 49) a) 60; $\triangle APB$ is equilateral b) 120; $m\angle APB = 60$ so $m\angle PAB = 60$. Since $\angle PAB$ & $\angle QAB$ are compl, $m\angle QAB = 30$. $\triangle QAB$ is isosc. So $m\angle AQB = 120$. |
| 21) 50 | 50) $\overline{RC} \cong \overline{GV}$ by CPCTC since $\triangle RTC \cong \triangle GHV$ by ASA |
| 22) 140 | |
| 23) 6 | |
| 24) $x = 60; y = 30$ | |