

Day 6 hw (Day 5 for Period 5) Textbook

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$$\begin{aligned} \textcircled{10} \quad 3n^2 - 0.75 &= 90 \\ 3n^2 &= 90.75 \\ n^2 &= 30.25 \\ n &= 5.5 \downarrow \\ m\angle WVZ &= 9(5.5) + 4 \\ &= 53.5 \end{aligned}$$

$$\begin{aligned} m\angle YVW &= 107 \\ m\angle VYX &= 180 - 107 \\ &= \boxed{73^\circ} \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad m\angle XYZ &= \frac{1}{2} m\angle YZW \\ &= \frac{1}{2} (73) \\ &= \boxed{36.5} \end{aligned}$$

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$$\begin{aligned} \textcircled{6} \quad JH &= 30.8 \\ HK = JG &= 2(JH) \\ &= 2(30.8) \\ &= \boxed{61.6 \text{ in.}} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad \angle 1 &= 90 - 61 = 29 \\ m\angle 2 &= 61 \\ m\angle 3 &= 90 \\ m\angle 4 &= 29 \\ m\angle 5 &= 90 \end{aligned}$$

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$$\begin{aligned} \textcircled{9} \quad 4x + 15 &= 7x + 2 \\ 13 &= 3x \\ \frac{13}{3} &= x \\ AB = CD &= 7x + 2 \\ &= 7\left(\frac{13}{3}\right) + 2 \\ &= \frac{91}{3} + 2 \\ AB &= \boxed{32\frac{1}{3}} \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad 12y &= 90 \\ y &= \frac{90}{12} = 7.5 \\ m\angle ACB &= 4y - 1 \\ &= 4(7.5) - 1 \\ &= 29 \\ m\angle BCD &= 2(29) = 58 \\ m\angle ABC &= 180 - 58 \\ &= \boxed{122^\circ} \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad m\angle 2 = m\angle 3 = m\angle 5 &= 2 \\ m\angle 1 &= 180 - 2(27) \\ &= \boxed{126} \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad m\angle 2 + m\angle 3 + 70 &= 180 \\ 2(m\angle 2) &= 110 \\ m\angle 2 &= 55 \\ m\angle 3 &= 55 \\ m\angle 4 &= 70 \\ m\angle 1 &= 55 \\ m\angle 5 &= 55 \end{aligned}$$

- 13) A. a  
B. S  
C. a  
D. S  
E. S

14)

5.  $\overline{EF} \cong \overline{GH}$   
6.  $\overline{EJ} \cong \overline{HJ}$   
7.  $\triangle FJE \cong \triangle GJH$   
8.  $\overline{FJ} \cong \overline{GJ}$   
9.  $\triangle FJE$  is isosc.
3. All rt  $\angle$ s  $\cong$ .  
4. A rect. is a  $\square$   
5. In a  $\square \rightarrow$  opp sides  $\cong$ .  
6. Definition of a midpt.  
7. SAS Thm.  
8. CPCTC  
9) Isos.  $\triangle$  is a  $\triangle$  w/ 2  $\cong$  sides.

15) The statement, "If a quad is a  $\square$ , then its opp sides are  $\cong$ ." is wrong. We don't know that the quad is a  $\square$ .  
Should have said, "If both pairs of opp. sides of a quad are  $\cong$ , then it is a  $\square$ ."

16)  $x + x + 3x + 3x = 64$   
 $x = 8$   
 $BC = 3(8) = \boxed{24 \text{ ft}}$

17)  $y + 10 = 2y - 5.3$   
 $15.3 = y$   
 $AC = 2(15.3) - 5.3 = \boxed{25.3 \text{ feet}}$

18)  $7b - 5 = 2b - 0.5$   
 $5b = 4.5$   
 $b = .9$   
 $PQ = RS = 7(.9) - 5$   
 $= 1.3$   
 $RT = 2(1.3) = \boxed{2.6 \text{ m}}$

Extra Practice  
# 14, 16-18

pp 399-400

3) Cannot be determined.  
We don't know anything about its angles or sides.  
Therefore, cannot conclude it's a  $\square$ . So, cannot conclude it's a rectangle.

4) Cannot be determined.  
It is a rhombus but we don't know anything about the angles.

⑤ A rhombus.

If a  $\square$  has  $\perp$  diags,  
it's a rhombus.

⑥ Rhombus

A  $\square$  w/ a pair of consecutive sides  
 $\cong$  is a rhombus.

⑦ You need to know that JKLM is a  $\square$ .

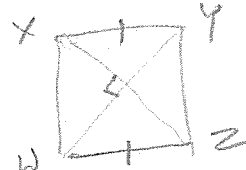
⑧ You need to know that one  $\angle$  is a right  $\angle$ ,  
such as  $\angle QPS$ .

⑨ Conclusion is valid.

⑩ Not valid; need to know EFGH is a  $\square$

⑪  $13x - 5.5 = 90$   
 $x \approx 7.34615...$

⑫  $14 - x = 2x + 5$   
 $9 = 3x$   
 $3 = x$

⑬  No  
Conclusion  
possible

⑭ No conclusion  
possible

⑮ rhombus,  
then parallelogram

⑯ parallelogram  
A quad with both pairs of  
opp  $\angle$ s  $\cong \rightarrow \square$ .

⑰ Since both pairs of opp. sides are  $\cong$ , PQRS is a  $\square$ .  
Since  $PZ = QZ = RZ = SZ$ ,  $PZ + RZ = QZ + SZ$ .  
Therefore,  $\overline{QS} \cong \overline{PR}$ . This is a  $\square$  with diags.  $\cong$ .  
Therefore, it is a rectangle.

⑱ Since this is a rhombus, they just need to measure  
the diags. to see if they are equal. A rect. has  $\cong$  diagonals.

⑲ parallelogram and a rhombus

