Chapter 5 Review

Write the name of every quadrilateral (parallelogram, rectangle, rhombus, square, trapezoid, or isosceles trapezoid) with the given properties.

1) All angles are right angles

2) All sides are congruent

3) Diagonals are congruent

4) Diagonals bisect each other

5) Diagonals are perpendicular

6) The quadrilateral is regular

7) Both pairs of opposite sides are parallel

8) Exactly one pair of opposite sides are parallel

9) Both pairs of opposite sides are congruent

10) Each diagonal bisects two vertex angles

Use the given diagram to complete each.

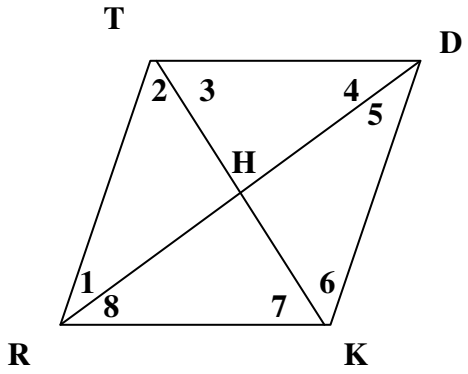
11) If DK = 12 and KR = 8, then TR = _____

12) If DR = 28 and KT = 18, then HR = _____

13) If m< 1 = 30° and m< 8 = 40°, then m< RTD = _____

14) If m< 2 = 45° and m< 3 = 55°, then m< 6 = _____

15) If TH = 2x + 1 and KH = 4x, then x = _____



State whether the given information is sufficient to prove that quadrilateral MNOP is a parallelogram. Write the theorem that supports your answer.

16) $\overline{MS} \cong \overline{OS}$; $\overline{NS} \cong \overline{PS}$

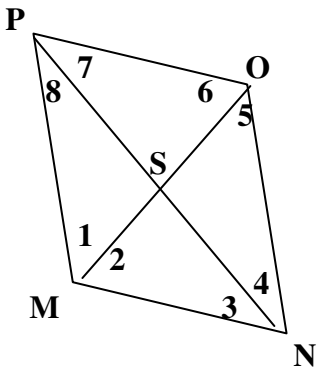
17) $\angle 1 \cong \angle 5$; $\angle 4 \cong \angle 8$

18) $\overline{PO} \cong \overline{MN}$; $\overline{PO} \parallel \overline{MN}$

19) $\angle PON \cong \angle PMN$; $\angle OPM \cong \angle ONM$

20) $\overline{MO} \cong \overline{NP}$; $\overline{MO} \perp \overline{NP}$

21) $\angle 1 \cong \angle 2$; $\angle 3 \cong \angle 4$



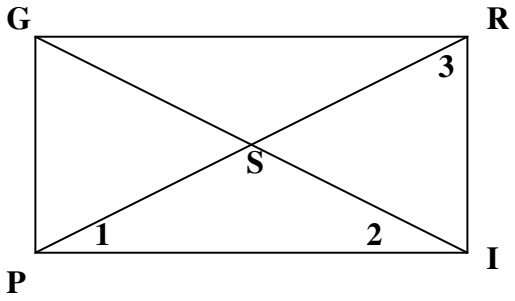
Given that GRIP is a rectangle, complete the following.

22) If $m\angle 1 = 20°$, then $m\angle 2$ = _____

23) If GI = 15.2, then RS = _____

24) If PS = 6x – 4 and GI = 28, then x = _____

25) If $m\angle 1 = 5t$ and $m\angle 3 = 8t - 1$, then t = _____



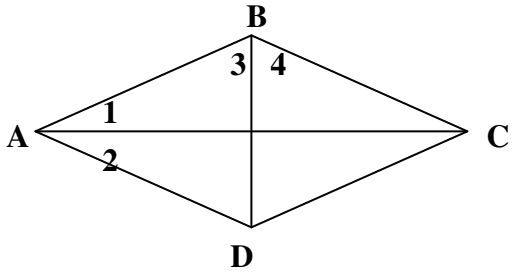
Given that ABCD is a rhombus, complete the following.

26) If AB = 7.5, then BC = _____

27) Name all angles congruent to $\angle 1$

28) If $m\angle 1 = 40$, then $m\angle 3$ = _____

29) If $m\angle 3 = 6x + 16$ and $m\angle 4 = 8x$, then x = _____



Given that JKLM is a square, complete the following.

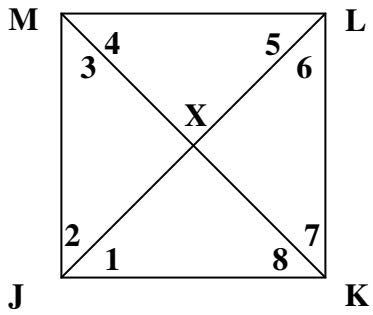
30) If MJ = 12, then ML = _____ and LK = _____

31) If MX = 8, then XJ = _____

32) If JL = 18, then MK = _____, JX = _____, and XK = _____

33) m< MJK = _____ and m< MXJ = _____

34) The numbered angles all = _____°

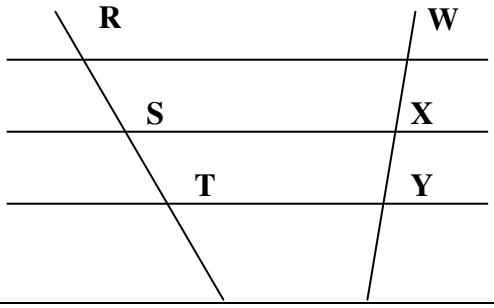


Given that all of the horizontal lines are parallel and WX = XY = YZ, complete the following.

35) If RT = 8, then ST = _____

36) If RS = x + y and ST = 2x – y and RT = 18

37) If WX = 12 then WY = _____



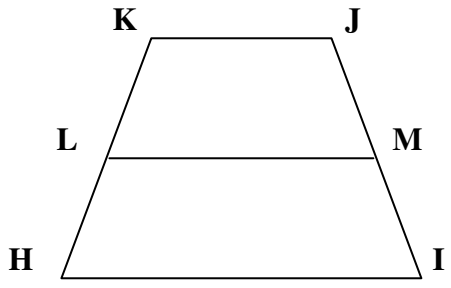
Given that seg. LM is the median of trapezoid HIJK, complete the following.

38) If KJ = 7 and HI = 15, then LM = _____

39) If HI = 22 and LM = 17, then KJ = _____

40) If trapezoid HIJK is isosceles and m< I = 85°, then m< K = _____

41) If HI = 4x, LM = 2x + 3, and KJ = x – 2, then x = _____



Answer Key:

1) rectangle, square
2) rhombus, square
3) rectangle, square, isosceles trapezoid
4) parallelogram, rectangle, rhombus, square
5) rhombus, square
6) square
7) parallelogram, rectangle, rhombus, square
8) trapezoid, isosceles trapezoid
9) parallelogram, rectangle, rhombus, square
10) rhombus, square

11) 12 12) 14 13) 110 14) 45 15) $\frac{1}{2}$

16) yes, Theorem 5-4 17) no 18) yes, theorem 5-5

19) yes, theorem 5-6 20) no 21) no

22) 20 23) 7.6 24) 3 25) 7

26) 7.5 27) < 2, < BCA, < DCA 28) 50 29) 8

30) 12, 12 31) 8 32) 18, 9, 9 33) 90, 90 34) 45

35) 4 36) x = 6 y = 3 37) 24

38) 11 39) 12 40) 95 41) 8