Answers to 6.3 Homework

1) Yes –both pairs of opposite angles are congruent

2) No—Does not meet any of the 5 reasons

4) x= 11 and y = 14

5) x = 4 and y = 8

6) Find the slope of all the sides. The slope of segments AB and DC are both 0. Since they're the same, those sides are parallel. The slope of segment AD is -5. The slope of BC is -5/3. They are obviously not the same. So those sides are not parallel. This shape is not a parallelogram. One pair of opposite sides is not enough information.

7) The diagonals, segment WY and XZ have the same midpoints (-2, ½) So this shape is a parallelogram because the diagonals bisect each other.

9) yes Both pairs of opposite sides are congruent

10) Yes One pair of opposite sides is parallel and congruent

11) No—not enough information

12) No—not enough information

13) Yes –The diagonals bisect each other

14) NO—Not enough information

18) x = 2 y = 29

19) x = 8 and y = 9

20) x = 30 and y = 15.5

21) x = 11 and y = 7

22) x = 40 and y = 20

23) x = 4 and y = 3

25) No KL = $\sqrt{53}$, LM = $\sqrt{37}$, MJ = $\sqrt{50}$ and JK = $\sqrt{26}$

The opposite sides are not congruent. This is not a parallelogram.