

Answer Key

Chapter 6

Lesson 6.3

Practice B

1. yes 2. no 3. no 4. yes 5. no 6. yes

7. $x = 6, y = 4$ 8. $x = 5, y = 75$

9. $x = 12, y = 7$

10. *Sample answer:* slope $\overline{AB} = \text{slope } \overline{CD} = -4$ and slope $\overline{BC} = \text{slope } \overline{AD} = \frac{2}{5}$; so $ABCD$ is a \square by definition.

11. *Sample answer:* $AB = CD = \sqrt{45}$ and $BC = DA = \sqrt{65}$ so $ABCD$ is a \square since both pairs of opposite sides are \cong .

12.  13. Yes, $\overline{AB} \parallel \overline{DC}$ and $\overline{AD} \parallel \overline{BC}$

14.

Statements	Reasons
1. $\angle AFD \cong \angle ADF$	1. Given
2. $\overline{AD} \cong \overline{AF}$	2. Sides opp. $\cong \triangle$ s are \cong .
3. $\overline{AF} \cong \overline{BC}$	3. Given
4. $\overline{AD} \cong \overline{BC}$	4. Transitive Prop. of \cong
5. $\overline{AB} \cong \overline{CD}$	5. Given
6. $ABCD$ is a \square .	6. If both pairs of opp. sides are \cong , then quad. is a \square .

15.

Statements	Reasons
1. $\triangle RQP \cong \triangle ONP$ R is midpoint of \overline{MQ} .	1. Given
2. $\overline{MR} \cong \overline{RQ}$	2. Definition of midpoint
3. $\overline{RQ} \cong \overline{NO}$	3. Corresp. parts of $\cong \triangle$'s are \cong .
4. $\overline{MR} \cong \overline{NO}$	4. Transitive Prop. of \cong
5. $\angle QRP \cong \angle NOP$	5. Corresp. parts of $\cong \triangle$'s are \cong .
6. $\overleftrightarrow{MQ} \parallel \overleftrightarrow{NO}$	6. Alternate Interior \angle 's Converse
7. $\overline{MR} \parallel \overline{NO}$	7. If two lines are \parallel , segments combined within them are \parallel
8. $MRON$ is a \square	8. If one pair of opp. sides are \parallel and \cong , then quad. is a \square .