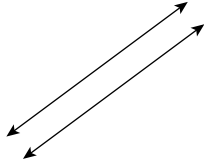


LESSON
7-4 **Practice A**
Classifying Lines

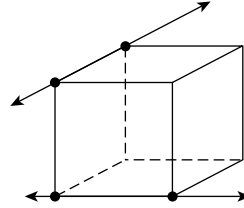
Choose the correct answer.

1. Which relationship best describes the pair of lines shown below?



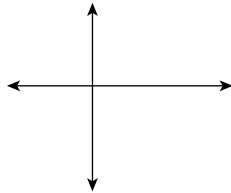
- A They are parallel lines.
- B They are intersecting lines.
- C They are perpendicular lines.
- D They are skew lines.

2. Which relationship best describes the pair of lines shown below?



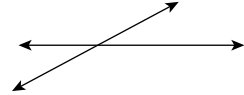
- F They are parallel lines.
- G They are intersecting lines.
- H They are perpendicular lines.
- J They are skew lines.

3. Which relationship best describes the pair of lines shown below?



- A They are parallel lines.
- B They are intersecting lines.
- C They are perpendicular lines.
- D They are skew lines.

4. Which relationship best describes the pair of lines shown below?



- F They are parallel lines.
- G They are intersecting lines.
- H They are perpendicular lines.
- J They are skew lines.

5. How is a pair of perpendicular lines different from a pair of intersecting lines?

6. What kinds of lines are similar to the rails of a railroad?

LESSON Practice A
7-4 Classifying Lines

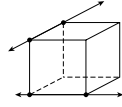
Choose the correct answer.

1. Which relationship best describes the pair of lines shown below?



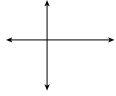
- A** They are parallel lines.
B They are intersecting lines.
C They are perpendicular lines.
D They are skew lines.

2. Which relationship best describes the pair of lines shown below?



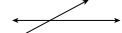
- F** They are parallel lines.
G They are intersecting lines.
H They are perpendicular lines.
J They are skew lines.

3. Which relationship best describes the pair of lines shown below?



- A** They are parallel lines.
B They are intersecting lines.
C They are perpendicular lines.
D They are skew lines.

4. Which relationship best describes the pair of lines shown below?



- F** They are parallel lines.
G They are intersecting lines.
H They are perpendicular lines.
J They are skew lines.

5. How is a pair of perpendicular lines different from a pair of intersecting lines?

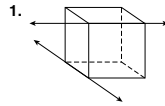
Possible answer: The perpendicular lines must meet to form right angles, while the intersecting lines do not.

6. What kinds of lines are similar to the rails of a railroad?

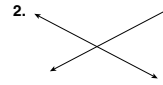
parallel lines

LESSON Practice B
7-4 Classifying Lines

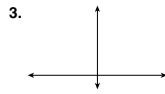
Classify each pair of lines.



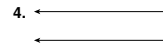
skew lines



intersecting lines



perpendicular lines



parallel lines

Match each description with its correct classification.

5. \overline{AB} and \overline{EF} lie on the same plane and never intersect. **B** \overline{AB} intersects \overline{EF} .
6. \overline{AB} and \overline{EF} cross each other at one common point. **A** $\overline{AB} \parallel \overline{EF}$
7. \overline{AB} and \overline{EF} lie on different planes and are neither parallel nor intersecting. **C** \overline{AB} and \overline{EF} are skew.
8. \overline{AB} and \overline{EF} intersect to form right angles. **D** $\overline{AB} \perp \overline{EF}$
9. Oak Street runs parallel to Elm Street in a flat section of town. Tom tells you to meet him at the intersection of Oak and Elm. Explain why these instructions are impossible to follow.

Because Oak and Elm are parallel streets on the same plane, they will never intersect.

10. Look around your classroom. Name a pair of parallel lines and a pair of perpendicular lines that you see.

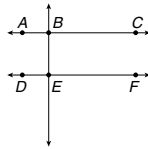
Answers will vary. Possible parallel lines: the 2 sides of my desk; Possible perpendicular lines: the top and side of the chalkboard

LESSON Practice C
7-4 Classifying Lines

Use the diagram for Exercises 1–3. Possible answers are given.

1. Name two pairs of perpendicular lines.

\overline{AC} and \overline{BE} ; \overline{DF} and \overline{BE}



2. Name a pair of parallel lines.

\overline{AC} and \overline{DF}

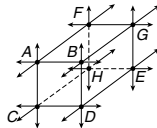
3. Name two pairs of intersecting lines.

\overline{AC} and \overline{BE} ; \overline{DF} and \overline{BE}

The lines in the figure intersect to form a rectangular box. Possible answers

4. Name two pairs of lines that are parallel to \overline{DE} .

\overline{BG} and \overline{AF} ; \overline{CH} and \overline{AF}



5. Name a pair of lines that are skew.

\overline{AC} and \overline{EH}

6. Name all the lines that are perpendicular to \overline{AB} .

\overline{AC} , \overline{AF} , \overline{BG} and \overline{BD}

7. Air traffic controllers must prevent two planes from sharing the same point in the sky at the same time or the planes will collide. What types of flight path lines will always prevent a collision of two planes?

skew path lines and parallel path lines

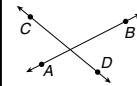
8. Line AD is perpendicular to line AB at point A . Line BC is perpendicular to line AB at point B . All the lines lie in the same plane. What is the relationship between line AD and line BC ?

They are parallel lines.

LESSON Reteach
7-4 Classifying Lines

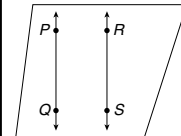
Some lines have relationships.

Intersecting lines cross each other at one point.



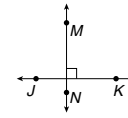
\overline{AB} intersects \overline{CD} .

Parallel lines lie in the same plane but never intersect.



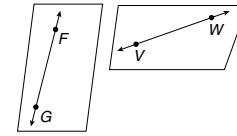
$\overline{PQ} \parallel \overline{RS}$

Perpendicular lines intersect to form right angles.



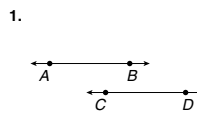
$\overline{JK} \perp \overline{MN}$

Skew lines lie in different planes and do not intersect.

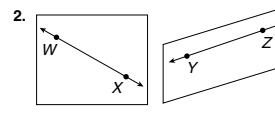


\overline{FG} and \overline{VW} are skew.

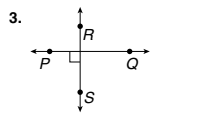
Classify each pair of lines.



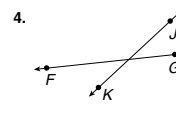
parallel



skew



perpendicular



intersecting