IM1 Unit 10 Review
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Name:
Date:
Period:

10.1 Pairs of Lines and Angles (pp. 497–502)

Think of each segment in the figure as part of a line.

a. Which line(s) appear perpendicular to $\overleftrightarrow{AB}$?

▶ $\overleftrightarrow{BD}$, $\overleftrightarrow{AC}$, $\overleftrightarrow{BH}$, and $\overleftrightarrow{AG}$ appear perpendicular to $\overleftrightarrow{AB}$.

b. Which line(s) appear parallel to $\overleftrightarrow{AB}$?

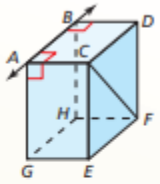
▶ $\overleftrightarrow{CD}$, $\overleftrightarrow{GH}$, and $\overleftrightarrow{EF}$ appear parallel to $\overleftrightarrow{AB}$.

c. Which line(s) appear skew to $\overleftrightarrow{AB}$?

▶ $\overleftrightarrow{CF}$, $\overleftrightarrow{CE}$, $\overleftrightarrow{DF}$, $\overleftrightarrow{FH}$, and $\overleftrightarrow{EG}$ appear skew to $\overleftrightarrow{AB}$.

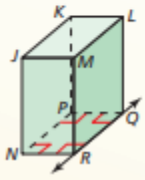
d. Which plane(s) appear parallel to plane ABC?

▶ Plane EFG appears parallel to plane ABC.



Think of each segment in the figure as part of a line. Which line(s) or plane(s) appear to fit the description?

1. line(s) perpendicular to $\overleftrightarrow{QR}$
2. line(s) parallel to $\overleftrightarrow{QR}$
3. line(s) skew to $\overleftrightarrow{QR}$
4. plane(s) parallel to plane LMQ



1)

2)

3)

4)

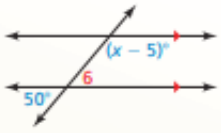
10.2 Parallel Lines and Transversals (pp. 503–508)

Find the value of x.

By the Vertical Angles Congruence Theorem, $m\angle 6 = 50°$.

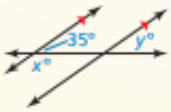
$(x - 5)° + m\angle 6 = 180°$	Consecutive Interior Angles Theorem
$(x - 5)° + 50° = 180°$	Substitute 50° for $m\angle 6$.
$x + 45 = 180$	Combine like terms.
$x = 135$	Subtract 45 from each side.

▶ So, the value of x is 135.



Find the values of x and y.

5.



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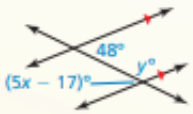

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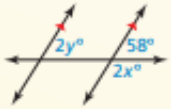

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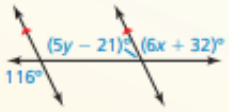


5)

6)

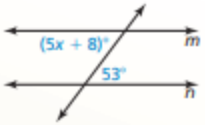
7)

8)

10.3 Proofs with Parallel Lines *(pp. 509–516)*

Find the value of x that makes $m \parallel n$.

By the Alternate Interior Angles Converse, $m \parallel n$ when the marked angles are congruent.



$(5x + 8)° = 53°$

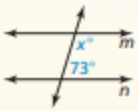
$5x = 45$

$x = 9$

▶ The lines m and n are parallel when $x = 9$.

Find the value of x that makes $m \parallel n$.

9.



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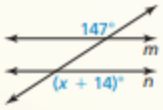

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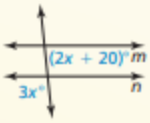

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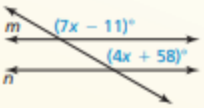

9)

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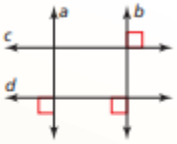
10.4 Proofs with Perpendicular Lines *(pp. 519–526)*

Determine which lines, if any, must be parallel. Explain your reasoning.

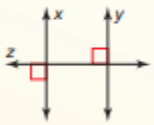


Lines a and b are both perpendicular to d, so by the Lines Perpendicular to a Transversal Theorem, $a \parallel b$.

Also, lines c and d are both perpendicular to b, so by the Lines Perpendicular to a Transversal Theorem, $c \parallel d$.

Determine which lines, if any, must be parallel. Explain your reasoning.

13.



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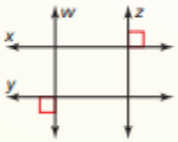

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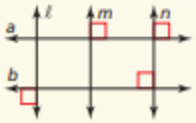

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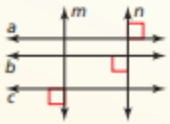

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