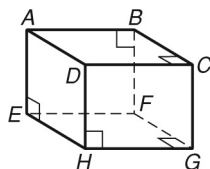


Parallel and Perpendicular Lines

Chapter Test *Form B*

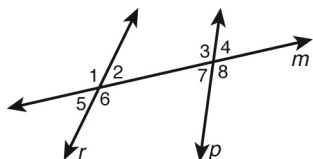
Circle the best answer.

Use the figure for Exercises 1 and 2.



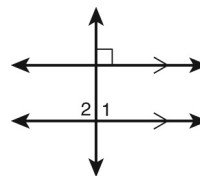
- Classify \overline{EH} and \overline{DH} .
 A skew segments
 B parallel segments
 C perpendicular segments
 D parallel planes
- How many segments are skew to \overline{AE} ?
 F 1 H 3
 G 2 J 4

Use the figure for Exercises 3 and 4.



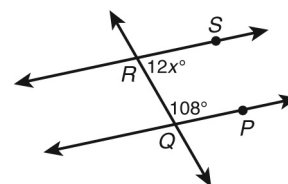
- Which are alternate exterior angles?
 A $\angle 1$ and $\angle 3$ C $\angle 3$ and $\angle 6$
 B $\angle 1$ and $\angle 8$ D $\angle 6$ and $\angle 7$
- Which statement is true?
 F $\angle 1$ and $\angle 2$ are alternate interior angles.
 G $\angle 1$ and $\angle 3$ are corresponding angles.
 H $\angle 3$ and $\angle 6$ are alternate exterior angles.
 J $\angle 3$ and $\angle 7$ are same-side interior angles.
- Which correctly completes the sentence?
 If two parallel lines are cut by a transversal, then the two pairs of same-side interior angles are _____.
 A supplementary
 B complementary
 C corresponding
 D congruent

- What type of angle is $\angle 1$?



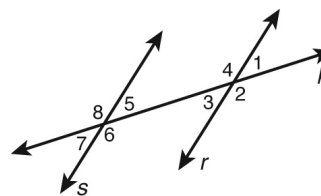
- | | |
|---------|------------|
| F acute | H obtuse |
| G right | J straight |

- Given $\overline{RS} \parallel \overline{QP}$, what is the value of x ?



- | | |
|-----|-------|
| A 6 | C 72 |
| B 9 | D 108 |

Use the figure for Exercises 8 and 9.

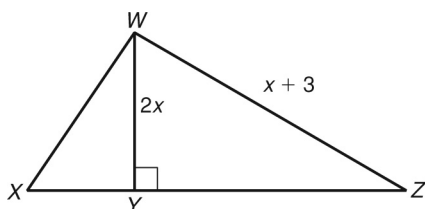


- Which information proves that $r \parallel s$?
 F $\angle 1 \cong \angle 3$ H $\angle 4 \cong \angle 6$
 G $\angle 4 \cong \angle 5$ J $\angle 5 \cong \angle 6$
- If $m\angle 3 = (4x + 20)^\circ$ and $m\angle 5 = (6x + 10)^\circ$, what value of x proves that $r \parallel s$?
 A 5 C 40
 B 15 D 100
- If a transversal is perpendicular to one of two parallel lines, how many different angle measures are formed?
 F 1 H 4
 G 3 J 8

Parallel and Perpendicular Lines

Chapter Test Form B continued

11. Which is a possible value of x ?

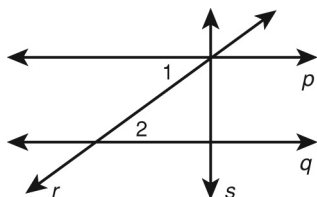


- A -2 C 3
B 1 D 4

12. Given: $\overline{AB} \parallel \overline{CD}$. E is on \overline{AB} , and F is on \overline{CD} . \overline{EF} is the perpendicular bisector of \overline{CD} . What is the shortest segment from E to \overline{CD} ?

- F \overline{AF} H \overline{EF}
G \overline{EC} J \overline{EC}

13. Which justifies Step 3?



Given: $s \perp q$ and $\angle 1 \cong \angle 2$.

Prove: $s \perp p$

Proof:

Statements	Reasons
1. $\angle 1 \cong \angle 2, s \perp q$	1. Given
2. $p \parallel q$	2. <u> ?</u>
3. $s \perp p$	3. <u> ?</u>

- A ' Transv. Thm.
B $p \parallel r$
C Conv. of Alt. Int. ? Thm.
D 2 lines \perp to same line \rightarrow 2 lines \parallel

14. Which describes the slope of a horizontal line?

- F positive H zero
G negative J undefined

15. What is the slope of the line through $(-1, 4)$ and $(5, 2)$?

- A -3 C $-\frac{1}{2}$
B $-\frac{1}{3}$ D $\frac{3}{2}$

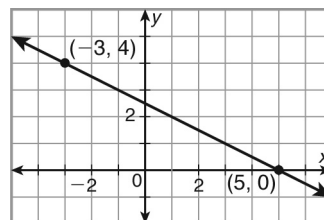
16. Given points $A(1, 5)$, $B(-2, -1)$, $C(1, 1)$, and $D(3, 5)$, what type of lines are \overline{AB} and \overline{CD} ?

- F parallel H horizontal
G perpendicular J vertical

17. Which is the equation of the line through $(1, 11)$ and $(-2, 2)$?

- A $y = 3x - 8$ C $y = \frac{1}{3}x + 8$
B $3x + y = 8$ D $-3x + y = 8$

18. Which is the equation of the line shown in the graph?



- F $y = -\frac{1}{2}x$ H $y = -\frac{1}{2}x + 5$
G $y = -2x + \frac{5}{2}$ J $y = -\frac{1}{2}x + \frac{5}{2}$

19. Which line is parallel to $y = \frac{1}{2}x + 5$?

- A $y = \frac{1}{2}x - 7$ C $y = x + 10$
B $y = -2x + 5$ D $y = 2x + 10$

20. Which line coincides with $y = 4x + 2$?

- F $y = 4x - 2$ H $y = -4x + 2$
G $4y = x + 8$ J $8x - 2y = -4$