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Angle Relationships

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Unit 1

1.5 Good Definitions

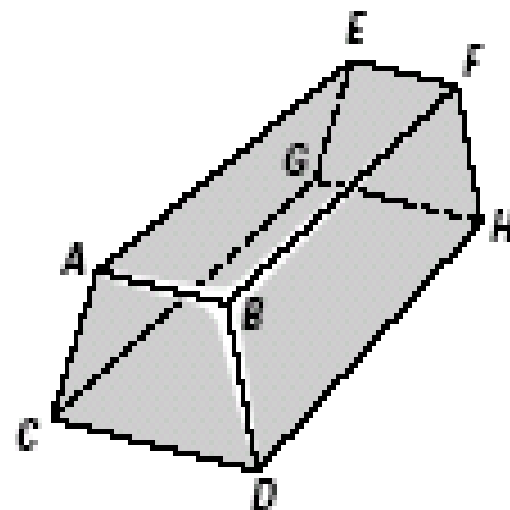
DO NOW

(1.4 Workbook Example Exercises Odds)

I Complete (Mini Lesson)

Work with a partner. For Exercises 1–7, each partner should try to give a different correct answer.

1. Name a pair of parallel lines.
2. Name a pair of skew lines.
3. Name a pair of lines that are neither parallel lines nor skew lines.
4. Name a pair of parallel planes.
5. Name a pair of planes that intersect in a line.
6. Name three planes that intersect at a point.
7. Name a pair of skew lines different from the pair named in Exercise 2.



Answers

Practice 1-4: Example Exercises

1. 22 2. 25 3. 32 4. 11.7 5. 6 6. 3 7. 3 8. 6 9. 5

10. 4 11. 12 12. 7 13. 3 14. 5 15. 6 16. 2 17. 4

18. 7 19. 3 20. 8 21. 7 22. 10 23. 9 24. 9 25. 23

26. 17 27. $x = 12$; $AB = 39$, $BC = 24$ 28. $x = 8$,

$DE = 24$; $EF = 24$ 29. $y = 10$; $GH = 19$; $HI = 32$

Answers

Practice 1-4: Mixed Exercises

1. 4 2. 12 3. 20 4. 6 5. 22 6. -10 or 6 7. -1 or 1

8. any three of the following: $\angle O$, $\angle MOP$, $\angle POM$, $\angle 1$

9. 15 10. 31 11. 14 12. 51 13. 90 14. 17 15. 107

16. 141 17. 68 18. $\angle ABD$, $\angle DBE$, $\angle EBF$, $\angle DBF$,

$\angle FBC$ 19. $\angle ABE$, $\angle DBC$ 20. $\angle ABE$, $\angle EBC$

21. $x = 11\frac{2}{3}$; $AB = 31$; $BC = 31$ 22. $x = 35\frac{2}{3}$;

$AB = 103$; $BC = 103$

Answers (mini lesson)

Answers may vary. Samples:

1. \overleftrightarrow{AB} and \overleftrightarrow{EF} 2. \overleftrightarrow{AB} and \overleftrightarrow{DH} 3. \overleftrightarrow{AC} and \overleftrightarrow{AE}

4. plane ABD and plane EFH 5. plane CDH and plane BFD

6. plane CDH , plane ACG , and plane ABD 7. \overleftrightarrow{EG} and \overleftrightarrow{BF}

Objective 1.5

- Understanding the meaning of terms like bisector and perpendicular

Essential Question

What is the bisector of an angle?

Vocabulary

- **Midpoint:** Point that divides a segment into two congruent segments.
 - **Perpendicular lines:** Lines that intersect at right angles. (90 degrees)
 - **Perpendicular bisector:** is a line, segment or ray that is perpendicular to a segment at its midpoint
 - **Angle bisector:** Angle that divides an angle into two congruent angles.
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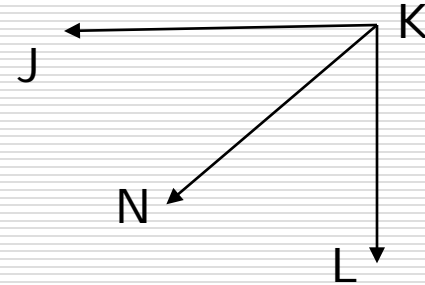
Example 2 page 34 TE

□ KN bisects $\angle JKL$

$$m\angle JKN = 5x - 25$$

$$m\angle NKL = 3x + 5$$

Solve for x and find $m\angle JKN$



ANSWER $x=15$, $\angle JKN = 50$

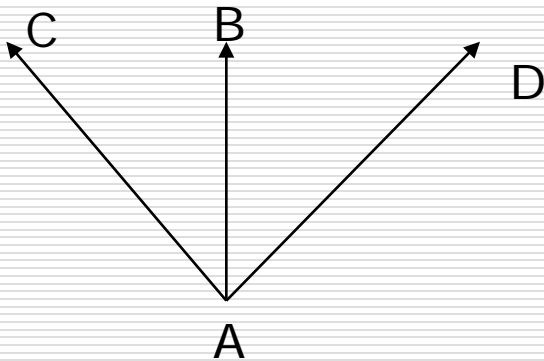
Problem 10 Page 34 TE

□ In the diagram AB bisects $\angle CAD$.

$$\angle CAB = 7x + 4$$

$$\angle BAD = 10x - 20$$

Solve for x and find $m\angle CAD$



Answer: $x=8, 120$

□ **TOD**

Work book

Practice 1.5 Mixed Exercises

Problems 14-20

□ **Homework**

Practice 1.5 Example Exercises

Problems 9-10
