

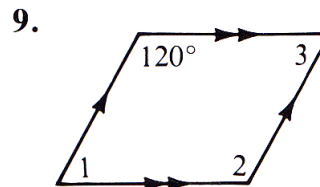
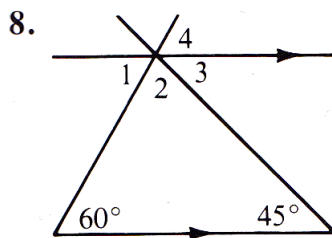
CHAPTER 3 REVIEW WORKSHEET

Remember to organize and show all of your work.

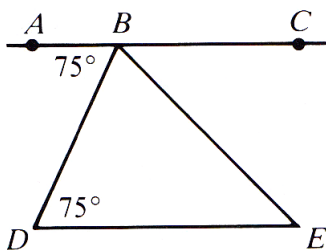
Complete each statement with the word *always*, *sometimes*, or *never*.

1. Two lines that do not intersect are ? parallel.
2. Two lines parallel to the same plane ? intersect.
3. Through a point not on a line, one can ? draw a line parallel to the line.
4. An acute triangle is ? a right triangle.
5. Two lines parallel to a third line are ? parallel to each other.
6. If two lines are cut by a transversal, then corresponding angles are ? congruent.
7. Two lines perpendicular to the same line are ? parallel.

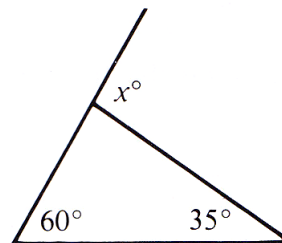
Find the measures of the numbered angles in the diagrams shown.



10. Explain why \overleftrightarrow{AC} and \overleftrightarrow{DE} must be parallel.



11. Find the value of x .



12. A polygon has 7 sides. Find the sum of the measures of the interior angles.
13. A regular polygon has 15 sides. Find the measure of each exterior angle.
14. Use inductive reasoning to predict the next two numbers in each sequence.
 - a. 1, 6, 10, 13, . . .
 - b. $\frac{1}{4}$, 1, 4, 16, . . .

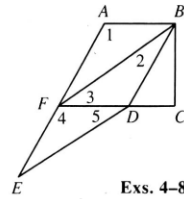
Cumulative Review, Chapters 3–4 Part 1

Complete.

- If two lines j and m are not parallel and do not intersect, then j and m are _____.
- In $\triangle ABC$, $\overline{AB} \cong \overline{AC}$ and $m\angle A = 90$. $\triangle ABC$ is a(n) _____, _____ triangle.
- If two parallel planes are cut by a third plane, the lines of intersection _____.

Use the given information to name segments that must be parallel. If there are no such segments, write *none*.

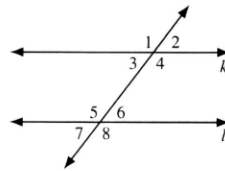
- $\angle 3 \cong \angle 5$ _____
- $m\angle 1 + m\angle ABD = 180$ _____
- $\angle 2 \cong \angle 3$ _____
- $\angle 4 \cong \angle 1$ _____
- $\overline{BC} \perp \overline{FC}$ and $\overline{BC} \perp \overline{AB}$. _____



Exs. 4–8

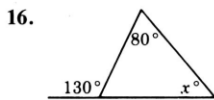
Given that $k \parallel l$, complete the following.

- If $m\angle 3 = 8x - 1$ and $m\angle 6 = 6x + 13$, then $x =$ _____.
- If $m\angle 7 = 71$, then $m\angle 3 =$ _____.
- If $m\angle 5 = 110$, then $m\angle 3 =$ _____.
- Name all angles congruent to $\angle 3$. _____
- Name all angles supplementary to $\angle 4$. _____
- What is the interior angle sum of a 12-sided polygon? _____
- The measure of each exterior angle of a regular polygon is 20. How many sides does the polygon have? _____

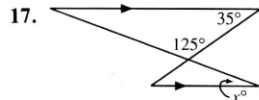


Exs. 9–13

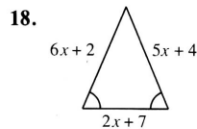
Find the value of x .



$x =$ _____



$x =$ _____



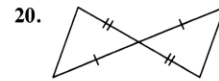
$x =$ _____

Cumulative Review, Chapters 3–4 Part 2

19. Predict the next two numbers in the sequence.

$1, \frac{1}{5}, \frac{1}{25}, \frac{1}{125},$ _____, _____

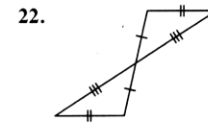
Use SSS, SAS, ASA, AAS, or HL to state how the triangles can be proved congruent.



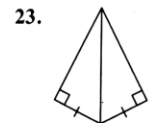
20.



21.



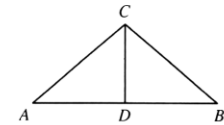
22.



23.

Complete each statement.

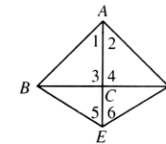
- If $\overline{AC} \cong \overline{BC}$, then $\angle A \cong \angle$ _____.
- If \overline{CD} is the perpendicular bisector of \overline{AB} , then C is equidistant from _____ and _____.
- If \overline{CD} is a median of $\triangle ABC$, then _____ \cong _____.
- If \overline{CD} is an altitude of $\triangle ABC$, then _____ \perp _____.
- If $\triangle ADC \cong \triangle BDC$, then $\overline{AC} \cong$ _____.
- If \overline{CD} is a median and an altitude of $\triangle ABC$, then \overline{CD} is the _____.



Exs. 24–29

Supply the missing reasons in the proof.

30. Given: $\angle 1 \cong \angle 2$; $\overline{AE} \perp \overline{BD}$.
Prove: $\angle 5 \cong \angle 6$



Statements	Reasons
1. $\angle 1 \cong \angle 2$; $\overline{AE} \perp \overline{BD}$	1. _____
2. $\angle 3 \cong \angle 4$	2. _____
3. $\overline{AC} \cong \overline{AC}$	3. _____
4. $\triangle ACB \cong \triangle ACD$	4. _____
5. $\overline{AB} \cong \overline{AD}$	5. _____
6. $\overline{AE} \cong \overline{AE}$	6. _____
7. $\triangle AEB \cong \triangle AED$	7. _____
8. $\angle 5 \cong \angle 6$	8. _____