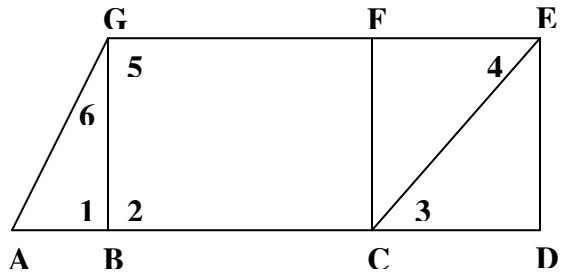


Review for Lessons 3-1 through 3-3

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

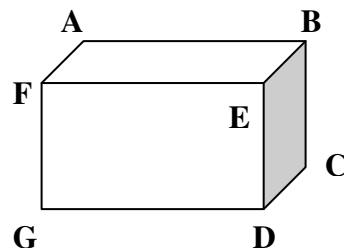
- 1) Two lines in the same plane are _____ parallel.
- 2) Two lines in the same plane are _____ skew.
- 3) Two noncoplanar lines _____ intersect.
- 4) Two planes _____ intersect.
- 5) A line and a plane _____ have exactly one point of intersection.
- 6) If two planes do not intersect, then they are _____ parallel.

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

7) $m\angle A = m\angle 3$ 8) $m\angle 3 = m\angle 4$ 9) $\overline{GB} \parallel \overline{FC}$ and $\overline{ED} \parallel \overline{FC}$ 10) $m\angle 3 + m\angle AGF = 180^\circ$ 11) $m\angle D + m\angle 2 = 180^\circ$ 12) $m\angle D = m\angle 1$ 13) $m\angle 6 + m\angle 5 = 180 - m\angle A$ 14) $\overline{GB} \perp \overline{AD}$ and $\overline{ED} \perp \overline{AD}$ 15) $m\angle 5 = m\angle 1$	
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Given that the hidden point is H answer the following.

- 16) Name two skew lines
- 17) Name two parallel lines
- 18) Name two parallel planes



Classify each pair of angles as *alternate interior angles*, *same-side interior angles*, or *corresponding angles*.

19) $\angle STU$ and $\angle SZX$

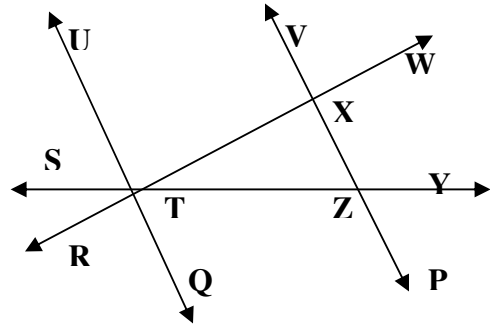
20) $\angle WXZ$ and $\angle YZX$

21) $\angle QTZ$ and $\angle VZT$

22) $\angle QTZ$ and $\angle PZT$

23) $\angle UTZ$ and $\angle VZY$

24) $\angle VXT$ and $\angle XTQ$

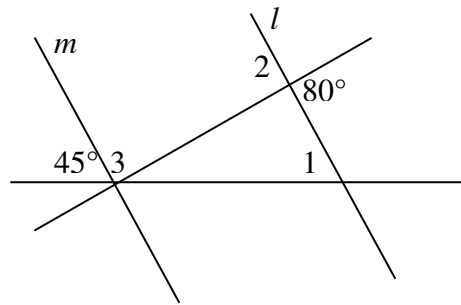


Given $l \parallel m$ find the measure of each angle.

25) $m\angle 1$

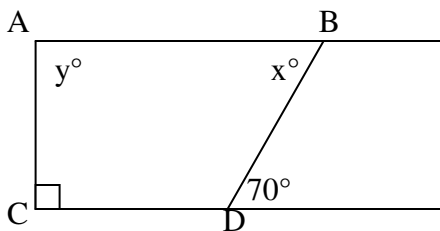
26) $m\angle 2$

27) $m\angle 3$

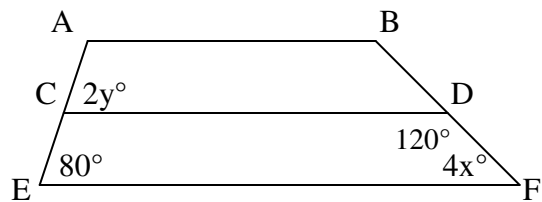


Solve for all unknown variables.

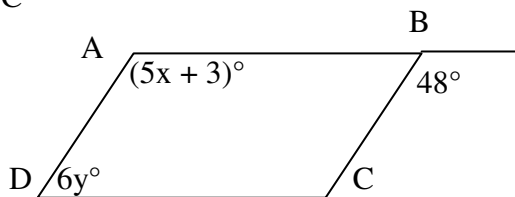
28) line $AB \parallel$ line CD



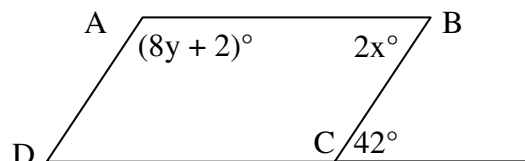
29) line $AB \parallel$ line $CD \parallel$ line EF

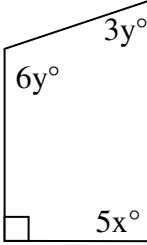
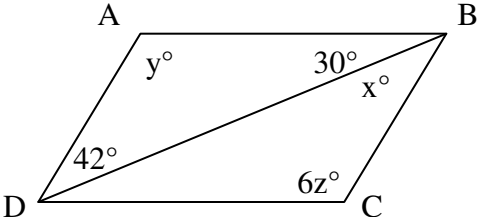
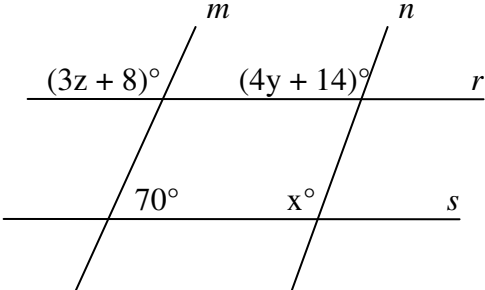
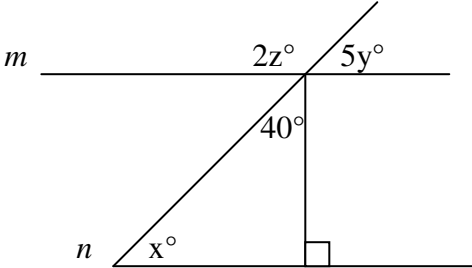
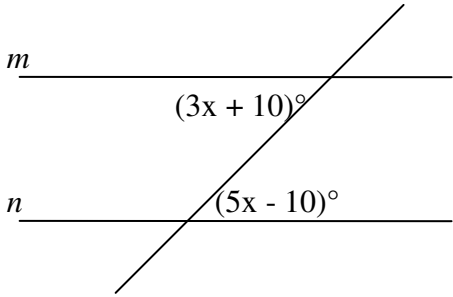
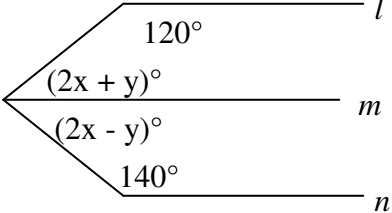


30) line $AB \parallel$ line CD and line $AD \parallel$ line BC



31) line $AB \parallel$ line CD and line $AD \parallel$ line BC



32) both vertical lines are parallel 	33) line $AB \parallel$ line CD and line $AD \parallel$ line BC 
34) $m \parallel n$ and $r \parallel s$ 	35) $m \parallel n$ 
36) $m \parallel n$ 	37) $l \parallel m \parallel n$ 

Answer Key:

- | | | |
|-----------------------------------|--|---------------------------------|
| 1) sometimes | 15) line $GE \parallel$ line AD | 29) $x = 15$ $y = 40$ |
| 2) never | 16) example: line AF and line GD | 30) $x = 9$ $y = 22$ |
| 3) never | 17) example: line AB and line GD | 31) $x = 21$ $y = 17$ |
| 4) sometimes | 18) example: plane AFG and plane BED | 32) $x = 18$ $y = 20$ |
| 5) sometimes | 19) corresponding | |
| 6) always | 20) same-side interior | 33) $x = 42$ $y = 108$ $z = 18$ |
| 7) line $AG \parallel$ line CE | 21) alternate interior | 34) $x = 110$ $y = 24$ $z = 34$ |
| 8) line $FE \parallel$ line CD | 22) same-side interior | 35) $x = 50$ $y = 10$ $z = 65$ |
| 9) line $GB \parallel$ line ED | 23) corresponding | 36) $x = 10$ |
| 10) none | 24) alternate interior | 37) $x = 25$ $y = 10$ |
| 11) line $GB \parallel$ line ED | 25) 45° | |
| 12) line $GB \parallel$ line ED | 26) 80° | |
| 13) line $AD \parallel$ line GE | 27) 100° | |
| 14) line $GB \parallel$ line ED | 28) $x = 70$ $y = 90$ | |