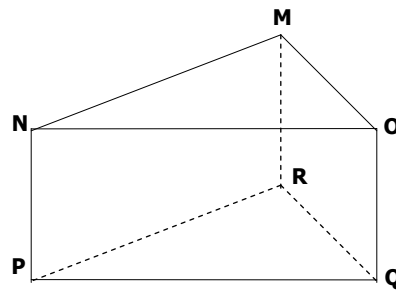


Parallel Lines and Transversals

Name _____ Period _____

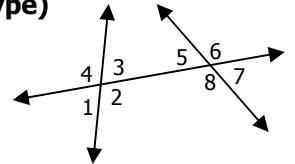
I. Refer to the figure at right.

- 1) Name two more pairs of parallel segments.
- 2) Name two more segments skew to NM
- 3) Name two transversals for parallel lines NO and PQ
- 4) Name a segment that is parallel to plane MRQ.



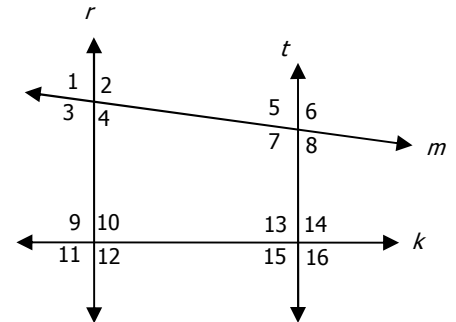
II. Identify the angles that go with the following types. (give all angles for each type)

- 5) Corresponding angles
- 6) Alternate exterior angles
- 7) Consecutive interior angles
- 8) Alternate interior angles



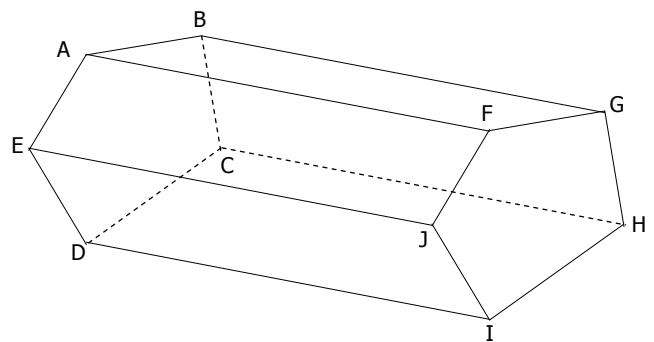
III. Using the figure below, state the transversal that forms each pair of angles. Then identify the special name for the angle pair.

- 9) $\angle 1$ and $\angle 12$ transversal = _____ special name = _____
- 10) $\angle 2$ and $\angle 10$ transversal = _____ special name = _____
- 11) $\angle 4$ and $\angle 9$ transversal = _____ special name = _____
- 12) $\angle 6$ and $\angle 3$ transversal = _____ special name = _____
- 13) $\angle 14$ and $\angle 10$ transversal = _____ special name = _____
- 14) $\angle 7$ and $\angle 13$ transversal = _____ special name = _____



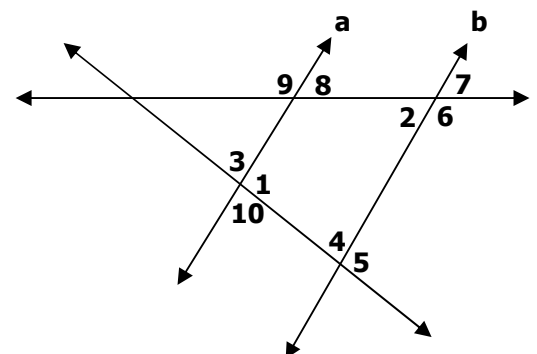
IV. The three-dimensional figure shown below is called a right pentagonal prism.

- 15) Identify all segments in plane JIH that appear to be skew to EB.
- 16) Which segments seem parallel to BG?
- 17) Which segments seem parallel to GH?
- 18) Identify all planes that appear parallel to plane FGH.
- 19) Name four segments skew to CD.
- 20) Name four segments skew to DI.



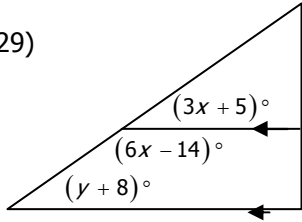
In figure below $a \parallel b$, $m\angle 1 = 78^\circ$, and $m\angle 2 = 47^\circ$. Find measure of each angle.

- 21) $\angle 3$
- 22) $\angle 4$
- 23) $\angle 5$
- 24) $\angle 6$
- 25) $\angle 7$
- 26) $\angle 8$
- 27) $\angle 9$
- 28) $\angle 10$

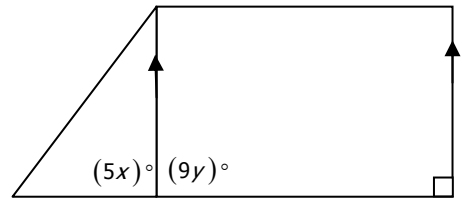


Find the missing values of x and y .

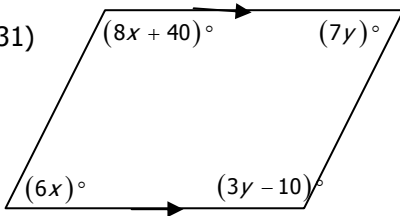
29)



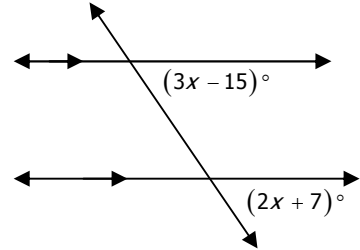
30)



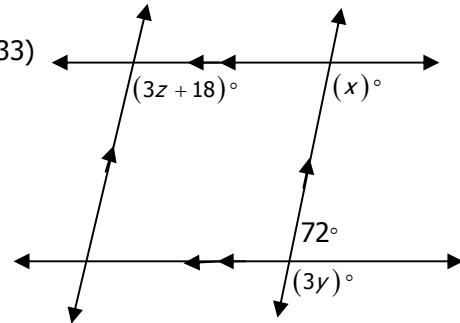
31)



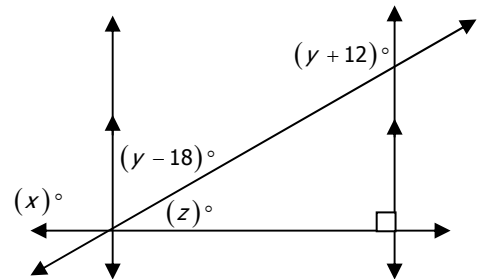
32)



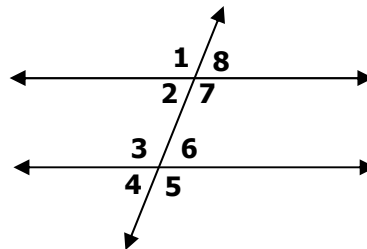
33)



34)



In the figure, $l \parallel m$. Find the measure of each angle. Each problem is different.



35) If $m\angle 7 = 100^\circ$, then $m\angle 3 =$ _____

39) If $m\angle 3 = 140^\circ$, then $m\angle 8 =$ _____

36) If $m\angle 7 = 175^\circ$, then $m\angle 6 =$ _____

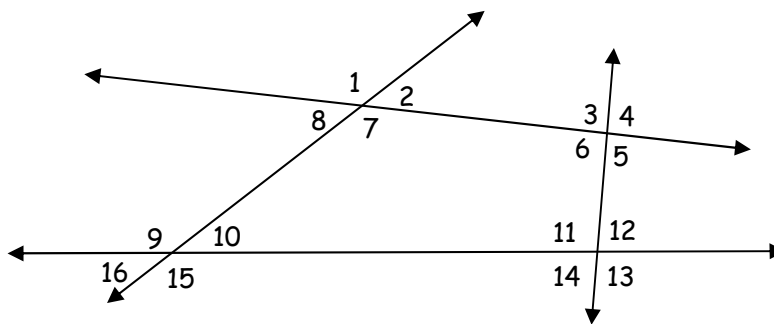
40) If $m\angle 4 = 30^\circ$, then $m\angle 1 =$ _____

37) If $m\angle 7 = 120^\circ$, then $m\angle 5 =$ _____

41) If $m\angle 4 = 40^\circ$, then $m\angle 2 =$ _____

38) If $m\angle 4 = 20^\circ$, then $m\angle 7 =$ _____

42) If $m\angle 7 = 125^\circ$, then $m\angle 4 =$ _____



Use the picture above to identify the special name for the angle pairs.

- | | |
|---------------------------------------|---------------------------------------|
| 43) $\angle 2$ and $\angle 6$ _____ | 49) $\angle 2$ and $\angle 1$ _____ |
| 44) $\angle 1$ and $\angle 9$ _____ | 50) $\angle 10$ and $\angle 14$ _____ |
| 45) $\angle 9$ and $\angle 6$ _____ | 51) $\angle 11$ and $\angle 6$ _____ |
| 46) $\angle 9$ and $\angle 13$ _____ | 52) $\angle 15$ and $\angle 11$ _____ |
| 47) $\angle 14$ and $\angle 16$ _____ | 53) $\angle 4$ and $\angle 13$ _____ |
| 48) $\angle 10$ and $\angle 16$ _____ | 54) $\angle 3$ and $\angle 11$ _____ |

I. If $m\angle 2 = 58^\circ$ and $m\angle 13 = 111^\circ$, then find the missing angle measures. $x \parallel m$, $z \parallel y$

- 55) $m\angle 1 =$ _____
- 56) $m\angle 2 =$ _____
- 57) $m\angle 3 =$ _____
- 58) $m\angle 4 =$ _____
- 59) $m\angle 5 =$ _____
- 60) $m\angle 6 =$ _____
- 61) $m\angle 7 =$ _____
- 62) $m\angle 8 =$ _____
- 63) $m\angle 9 =$ _____
- 64) $m\angle 10 =$ _____
- 65) $m\angle 11 =$ _____
- 66) $m\angle 12 =$ _____
- 67) $m\angle 13 =$ _____
- 68) $m\angle 14 =$ _____
- *69) $m\angle 15 =$ _____
- 70) $m\angle 16 =$ _____ (16-19 look at line x and m)
- 71) $m\angle 17 =$ _____
- 72) $m\angle 18 =$ _____
- 73) $m\angle 19 =$ _____

