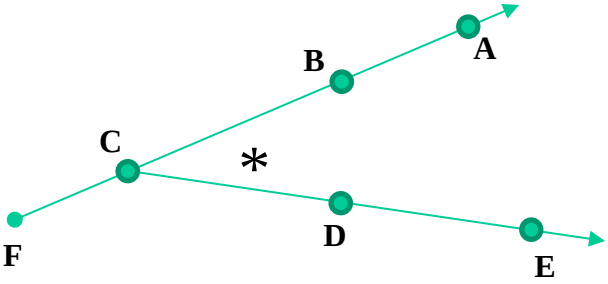
Angle Information

Angle Names

To name an angle usually requires 3 letters: one letter from one side, the letter at the vertex, and one letter from the other side

The angle marked with the * could be named: ∠ACE or ∠BCD or ∠ACD or ∠BCE.

We cannot refer to it by just the vertex letter C, because of the confusion with ∠FCE.

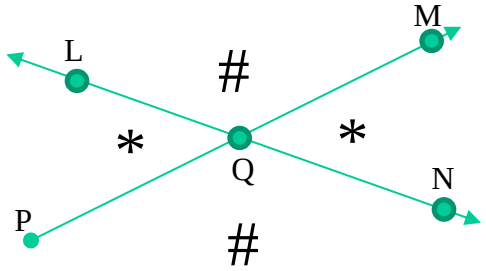


Special Angles

Complementary: two angles that add together to equal 90
Supplementary: two angles that add together to equal 180

Linear Pairs: two adjacent angles (share two letters of the 3-letter name) that are supplementary – add to 180 (they form a line; can look like a y)

Angles marked with one of each (* and #) will form a linear pair.



Linear Pairs: ∠LQM and either ∠LQP or ∠NQM
∠PQN and either ∠PQL or ∠MQN

Vertical Angle Pairs: two angles (nonadjacent) that are on opposite sides of intersecting lines (or line segments) (they are equal and are on opposite sides of the "x")

The angles marked with the * or # are vertical angle pairs (both * or both #)

Vertical Angles : ∠LQM and ∠PQN (#) and ∠LQP and ∠MQN (*)

Special Angle Sums (used later)

Central angles of a circle always add to 360.

Linear pairs or supplementary angles add to 180.

The sum of angles in a polygon is equal to

180 times the number of sides minus 2:

$S = 180 \times (n - 2)$

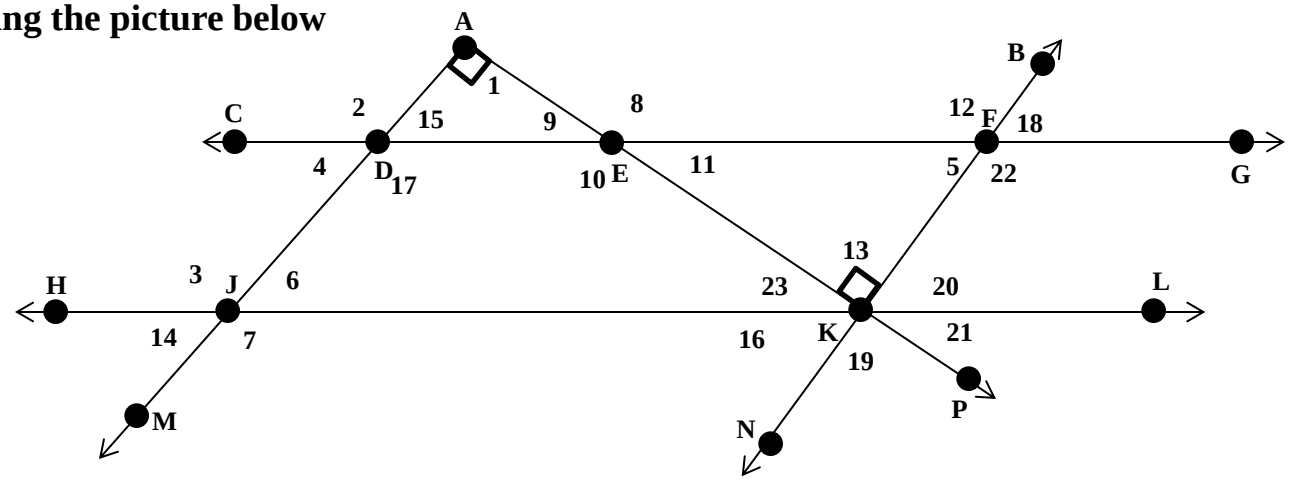
Sides	Name	Angle Sum
3	Triangle	180
4	Quadrilateral	360
5	Pentagon	540
6	Hexagon	720
7	Heptagon	900
8	Octagon	1080
9	Nonagon	1260
10	Decagon	1440
12	Dodecagon	1800
N	N - gon	(n-2) x 180

(Start with a triangle's angles summing to 180; then add 180 for each additional side)

Naming Angles Worksheet

Name: _____

Using the picture below



Answer the following: (use # names for angles)

∠	3-Letter Name	Vertical ∠ with	Linear Pair with	Angle Classification
1.	∠_DAE_	∠_none_	∠_none_	___right___
2.	∠_____	∠_____	∠_____	_____
3.	∠_____	∠_____	∠_____	_____
4.	∠_____	∠_____	∠_____	_____
5.	∠_____	∠_____	∠_____	_____
6.	∠__DJK_	∠__14__	∠_ 3 or 7 _	_____acute_____
7.	∠_____	∠_____	∠_____	_____
8.	∠_____	∠_____	∠_____	_____
9.	∠_____	∠_____	∠_____	_____
10.	∠_____	∠_____	∠_____	_____
11.	∠_____	∠_____	∠_____	_____
12.	∠_BFC_	∠_22_	∠_5 or 18_	__obtuse___
13.	∠_____	∠_____	∠_____	_____
14.	∠_____	∠_____	∠_____	_____
15.	∠_____	∠_____	∠_____	_____
16.	∠_____	∠_____	∠_____	_____
17.	∠ __JDE_	∠__2__	∠_ 4 or 15_	___obtuse____
18.	∠_____	∠_____	∠_____	_____
19.	∠_____	∠_____	∠_____	_____
20.	∠_____	∠_____	∠_____	_____
21.	∠_____	∠_____	∠_____	_____
22.	∠_____	∠_____	∠_____	_____
23.	∠__JKA_	∠_21_	∠_13&20_	___acute____

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24. Name two angles that have to be complementary: ∠_____ ∠_____
25. Name two angles that have to be supplementary: ∠_____ ∠_____
26. Bonus: Which angle is the *only* angle that can be named by one letter? ∠_____