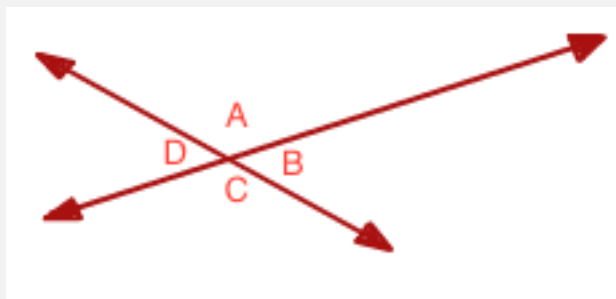




## Lines and Angles

### About These Problems

These questions often involve a pair of intersecting lines and involve you finding the angles between the intersection. The key thing about intersecting lines is that the angle on one side of a line adds up to 180 degrees and all the angles around an intersection add up to 360 degrees. Angles opposite each other in an intersection are called vertical angles.



#### Rules:

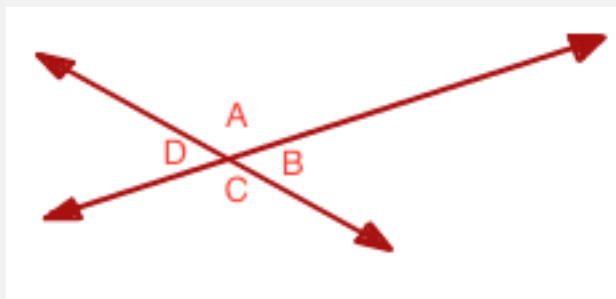
$$A = C \text{ and } B = D \text{ (vertical angles)}$$

$$A + D = A + B = 180 \text{ degrees}$$

$$B + C = D + C = 180 \text{ degrees}$$

$$A + B + C + D = 360 \text{ degrees}$$

**Question.** Based upon the figure below if  $A = 140$  degrees what is  $D + C/2$ ?



1. 160 degrees
2. 150 degrees
3. 115 degrees
4. 120 degrees
5. 110 degrees

**Answer. 5:** You know that  $A + D = 180$  so  $D = 40$  degrees and  $C/2$  is  $140/2$ .  $70 + 40 = 110$  degrees.