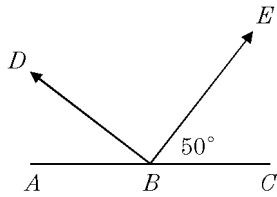
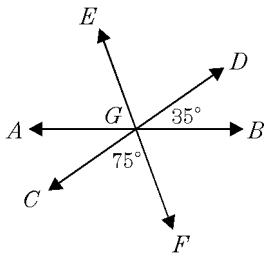


1. In the accompanying diagram, \overleftrightarrow{ABC} is a straight line, $\overleftrightarrow{BD} \perp \overleftrightarrow{BE}$, and $m\angle CBE = 50$. Find $m\angle ABD$.



2. In the accompanying diagram, lines \overleftrightarrow{AB} , \overleftrightarrow{CD} , and \overleftrightarrow{EF} intersect at G . If $m\angle DGB = 35$ and $m\angle CGF = 75$, find $m\angle AGE$.



3. Which pair of angles x and y are supplementary?

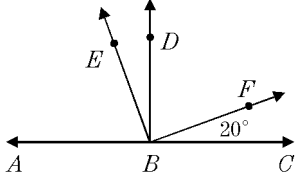
A. $m\angle x = 113$
 $m\angle y = 67$

B. $m\angle x = 76$
 $m\angle y = 14$

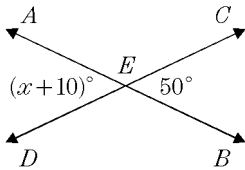
C. $m\angle x = 140$
 $m\angle y = 190$

D. $m\angle x = 180$
 $m\angle y = 180$

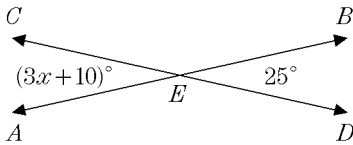
4. In the accompanying diagram, $\overrightarrow{BD} \perp \overrightarrow{ABC}$ at B and $\overrightarrow{BE} \perp \overrightarrow{BF}$ at B . If $m\angle FBC = 20$, what is $m\angle EBD$?



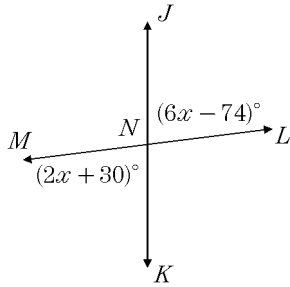
5. In the accompanying diagram, lines \overleftrightarrow{AB} and \overleftrightarrow{CD} intersect at point E . If $m\angle AED = (x + 10)$ and $m\angle CEB = 50$, find x .



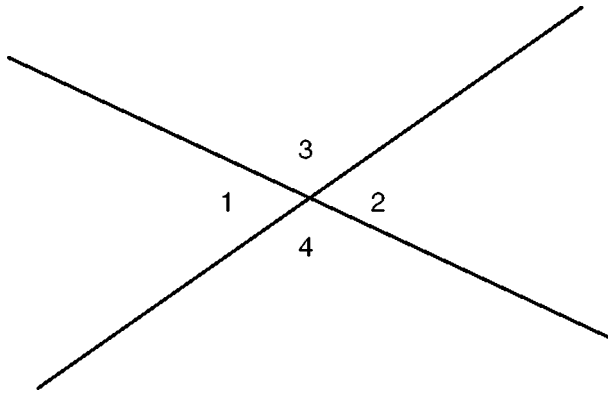
6. In the accompanying diagram, \overleftrightarrow{AB} and \overleftrightarrow{CD} intersect at E . If $m\angle BED = 25$ and $m\angle AEC = 3x + 10$, find the value of x .



7. In the accompanying diagram, lines \overleftrightarrow{JK} and \overleftrightarrow{LM} intersect at N , $m\angle JNL = 6x - 74$, and $m\angle MNK = 2x + 30$. What is the value of x ?



8. In the accompanying figure, two lines intersect, $m\angle 3 = 6t + 30$, and $m\angle 2 = 8t - 60$. Find the number of degrees in $m\angle 4$.



9. \overleftrightarrow{AB} and \overleftrightarrow{CD} intersect at E . If $m\angle AEC = 5x - 20$ and $m\angle BED = x + 50$, find, in degrees, $m\angle CEB$.

10. In two supplementary angles, the measure of one angle is 6 more than twice the measure of the other. The measures of these two angles are

11. Two vertical angles are complementary. Find the number of degrees in each angle.
12. The larger angle of two supplementary angles has a measure of 20° more than the measure of the smaller angle. Find the number of degrees in the measure of the *smaller* angle.
13. Two angles are complementary. If the measure of one angle is 20° more than the measure of the second angle, what is the number of degrees in the measure of the *smaller* angle?
14. Two supplementary angles are in the ratio 1:5. What is the measure of the smaller angle?
15. The measures of two supplementary angles are in the ratio 4:5. Find the number of degrees in the measure of the *smaller* angle.
16. Two complementary angle are in the ratio 3:2. The number of degrees in the smaller angle is
- A. 18 B. 36 C. 54 D. 72

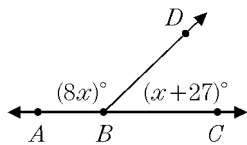
17. Two complementary angles are in the ratio 8:1. The number of degrees in the larger angle is

- A. 10 B. 20 C. 80 D. 160

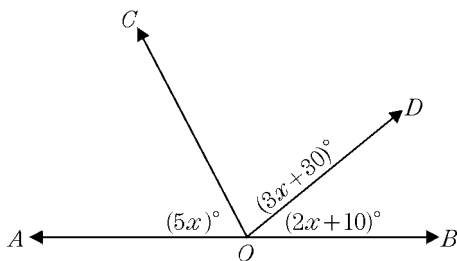
18. Two complementary angles have measures in the ratio 5:4. What is the measure of the smaller angle?

19. The ratio of two complementary angles is 7:2. What is the measure, in degrees, of the larger angle?

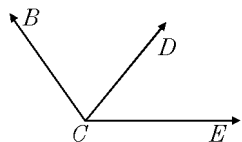
20. In the accompanying diagram, \overleftrightarrow{ABC} is a straight line. $m\angle ABD = 8x$, and $m\angle DBC = x + 27$. Find x .



21. In the accompanying diagram, \overleftrightarrow{AOB} is a straight line, $m\angle AOC = 5x$, $m\angle COD = 3x + 30$, and $m\angle DOB = 2x + 10$. Find the value of x .



22. In the accompanying diagram, $m\angle ECB = 6x$, $m\angle ECD = 3x - 11$, and $m\angle DCB = 74$. What is the value of x ?



1.
Answer: 40
2.
Answer: 70
3.
Answer: A
4.
Answer: 20
5.
Answer: 40
6.
Answer: 5
7.
Answer: 26
8.
Answer: 120
9.
Answer: 112.5
10.
Answer: 58° and 122°
11.
Answer: 45
12.
Answer: 80
13.
Answer: 35
14.
Answer: 30°
15.
Answer: 80
16.
Answer: B
17.
Answer: C
18.
Answer: 40°
19.
Answer: 70
20.
Answer: 17
21.
Answer: 14
22.
Answer: 21