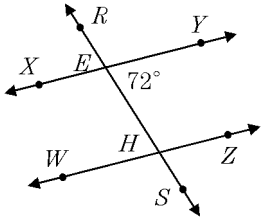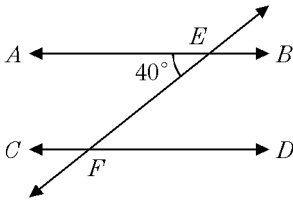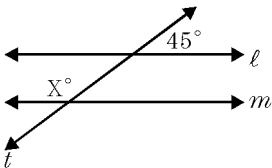1. In the accompanying diagram, transversal $\overleftrightarrow{RS}$ intersects parallel lines $\overleftrightarrow{XY}$ and $\overleftrightarrow{WZ}$ at E and H, respectively. If $m\angle HEY = 72$, what is $m\angle ZHS$?
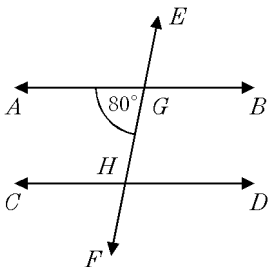
2. In the accompanying figure, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are cut by transversal $\overleftrightarrow{EF}$. If $m\angle AEF = 40$, find $m\angle DFE$.
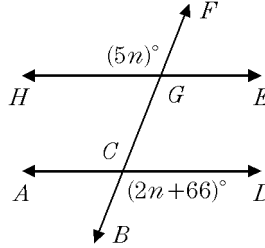
3. In the accompanying diagram, parallel lines ℓ and m are cut by transversal t at a $45°$ angle. Find the number of degrees in the measure of angle x.
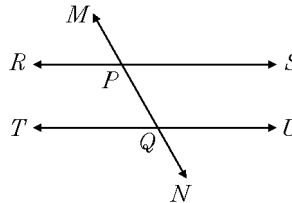
4. In the accompanying diagram, $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are parallel and $\overleftrightarrow{EF}$ intersects $\overleftrightarrow{AB}$ at G and $\overleftrightarrow{CD}$ at H. If $m\angle AGH = 80$, what is $m\angle CHG$?
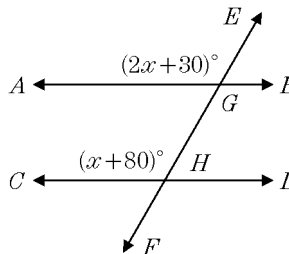
5. In the accompanying diagram, parallel lines $\overleftrightarrow{HE}$ and $\overrightarrow{AD}$ are cut by transversal $\overrightarrow{BF}$ at points G and C, respectively. If $m\angle HGF = 5n$ and $m\angle BCD = 2n + 66$, find n.

6. In the accompanying diagram, transversal $\overrightarrow{MN}$ intersects parallel lines $\overleftrightarrow{RS}$ and $\overleftrightarrow{TU}$ at points P and Q, respectively. If $m\angle RPM = 50$, find $m\angle PQU$.

7. In the accompanying diagram, $\overleftrightarrow{AB}$ is parallel to $\overleftrightarrow{CD}$, and $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are cut by transversal $\overrightarrow{EF}$ at points G and H, respectively. If $m\angle EGA = (2x + 30)$ and $m\angle EHC = (x + 80)$, find x.
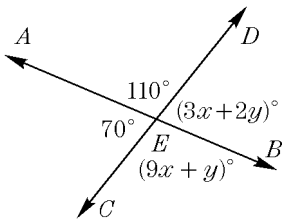
8. In the accompanying diagram, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are intersected by $\overleftrightarrow{EF}$ at G and H, respectively. If $m\angle AGH = 5x$ and $m\angle CHG = x + 12$, find the value of x.
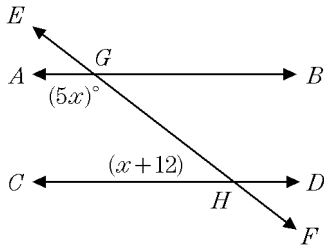
9. Two angles are complementary. If the measure of one angle is 20° more than the measure of the second angle, what is the number of degrees in the measure of the *smaller* angle?

10. Two vertical angles are complementary. Find the number of degrees in each angle.

11. One angle is four times as large as a second angle. If the angles are supplementary, find the number of degrees in the smaller angle.

12. In the accompanying diagram, $\overleftrightarrow{ABC}$ is a straight line. $m\angle ABD = 8x$, and $m\angle DBC = x + 27$. Find x.
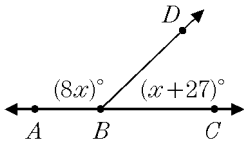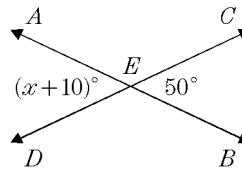
13. Lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect at E, $m\angle AED = 110$, $m\angle DEB = 3x + 2y$, $m\angle BEC = 9x + y$, and $m\angle CEA = 70$. Find the values of x and y. Check your answer. [*Only an algebraic solution will be accepted.*]
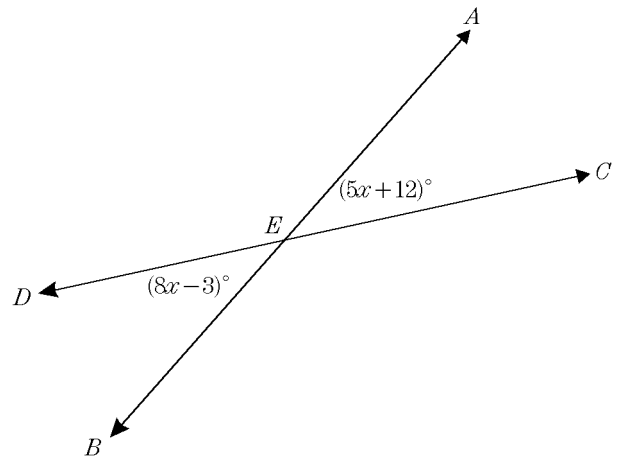
14. In the accompanying diagram, $\overleftrightarrow{AOB}$ is a straight line, $m\angle AOC = 5x$, $m\angle COD = 3x + 30$, and $m\angle DOB = 2x + 10$. Find the value of x.
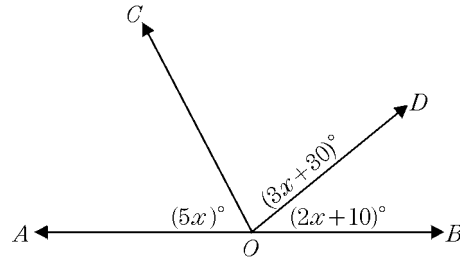
15. In the accompanying diagram, lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect at point E. If $m\angle AED = (x + 10)$ and $m\angle CEB = 50$, find x.

16. In the accompanying diagram , $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect at E, $m\angle AEC = 5x + 12$, and $m\angle DEB = 8x - 3$. Find the number of degrees in the measure of $\angle AEC$.

Angles   9/13/2017

1.
Answer: 72

2.
Answer: 40

3.
Answer: 135

4.
Answer: 100

5.
Answer: 22

6.
Answer: 130

7.
Answer: 50

8.
Answer: 28

9.
Answer: 35

10.
Answer: 45

11.
Answer: 36

12.
Answer: 17

13.
Answer: $x = 10,\ y = 20$

14.
Answer: 14

15.
Answer: 40

16.
Answer: 37