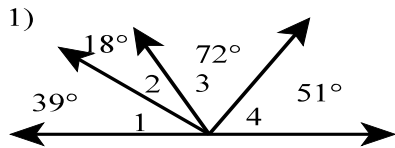
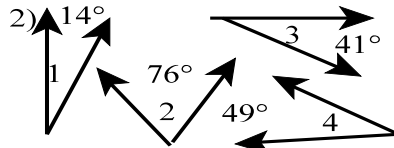


Angle Relationships 2 (KEY)

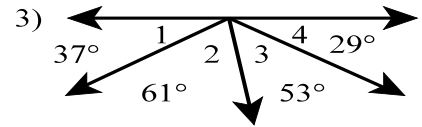
Identify each pair of complementary angles.



$\angle 1$ & $\angle 4$, $\angle 2$ & $\angle 3$



$\angle 1$ & $\angle 2$, $\angle 3$ & $\angle 4$

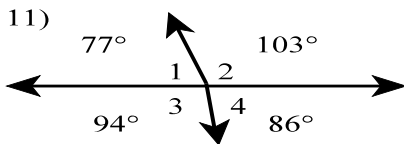


$\angle 1$ & $\angle 3$, $\angle 2$ & $\angle 4$

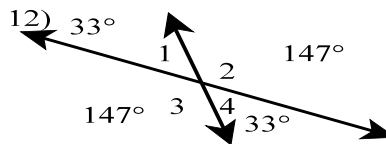
Find the measures of the complements of angles with these measures.

4) 17° 5) 45° 6) 53° 7) n° 8) y° 9) 11° 10) 33°
 $90^\circ - 17^\circ = \boxed{73^\circ}$ $90^\circ - 45^\circ = \boxed{45^\circ}$ $= \boxed{37^\circ}$ $\boxed{90^\circ - n^\circ}$ $\boxed{90^\circ - y^\circ}$ $90^\circ - 11^\circ = \boxed{79^\circ}$ $\boxed{= 57^\circ}$

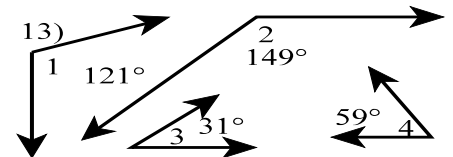
Identify each pair of supplementary angles.



$\angle 1$ & $\angle 2$, $\angle 3$ & $\angle 4$



$\angle 1$ & $\angle 2$, $\angle 1$ & $\angle 3$
 $\angle 4$ & $\angle 2$, $\angle 4$ & $\angle 3$



$\angle 1$ & $\angle 4$, $\angle 2$ & $\angle 3$

Find the measures of the supplements of angles with these measures.

14) 144° 15) 37° 16) 111° 17) 65° 18) 88° 19) v° 20) q°
 $180^\circ - 144^\circ = \boxed{36^\circ}$ $180^\circ - 37^\circ = \boxed{143^\circ}$ $= \boxed{69^\circ}$ $= \boxed{115^\circ}$ $= \boxed{92^\circ}$ $= \boxed{180^\circ - v^\circ}$ $= \boxed{180^\circ - q^\circ}$

21) $\angle X \cong \angle Y$ and $m\angle X = 19^\circ$. Find the measure of the supplement of $\angle Y$.

$m\angle Y = 19^\circ$, Supp. = $180^\circ - 19^\circ = \mathbf{161^\circ}$

22) $\angle P \cong \angle Q$ and $m\angle Q = 34^\circ$. Find the measure of the complement of $\angle P$.

$m\angle P = 34^\circ$, Comp. = $90^\circ - 34^\circ = \mathbf{56^\circ}$

23) $\angle L \cong \angle M$ and $m\angle M = 72^\circ$. Find the measure of the complement and the supplement of $\angle L$.

$m\angle L = 72^\circ$, Comp. = $90^\circ - 72^\circ = \mathbf{18^\circ}$

Supp. = $180^\circ - 72^\circ = \mathbf{108^\circ}$

24) $\angle R \cong \angle S$ and $m\angle R = 48^\circ$. Find the measure of the complement and the supplement of $\angle S$.

$m\angle S = 48^\circ$, Comp. = $90^\circ - 48^\circ = \mathbf{42^\circ}$

Supp. = $180^\circ - 48^\circ = \mathbf{132^\circ}$

25) $\angle 1$ is twice as large as $\angle 2$, and $\angle 1$ and $\angle 2$ are supplementary. What is the measure of each angle?

$\angle 2 = x$, $\angle 1 = 2x$

$x + 2x = 180^\circ$

$3x = 180^\circ$

$x = \mathbf{60^\circ} = \angle 2$

$2x = \mathbf{120^\circ} = \angle 1$

26) $\angle A$ is 38° smaller than $\angle B$, and $\angle A$ and $\angle B$ are complementary. What is the measure of each angle?

$\angle B = x$, $\angle A = x - 38^\circ$

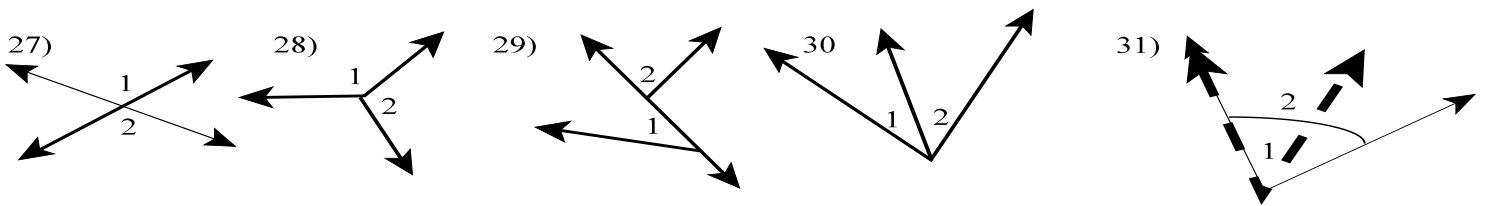
$x + x - 38^\circ = 90^\circ$

$2x - 38^\circ = 90^\circ$

$x = \mathbf{64^\circ} = \angle B$

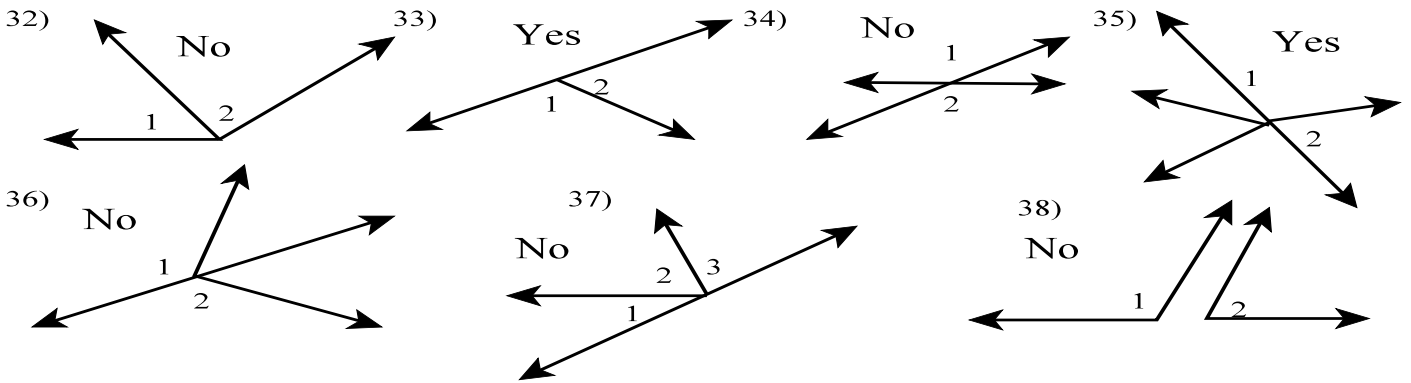
$x - 38^\circ = \mathbf{26^\circ} = \angle A$

Are the angles in each problem adjacent angles? If not, why not?

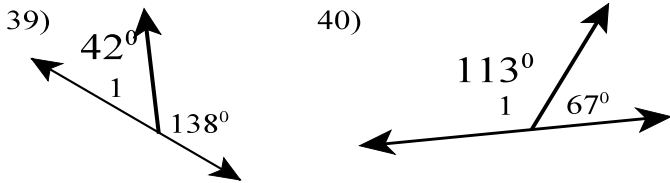


27) NO No common side
 28) YES
 29) NO No common vertex
 30) YES
 31) NO Interiors intersect

Tell whether $\angle 1$ and $\angle 2$ form a linear pair.



Give the measure of the missing angle.



41) $\angle A$ and $\angle B$ form a linear pair. $m\angle A = 26^\circ$. Find the $m\angle B$.

$$m\angle B = 180^\circ - 26^\circ = 154^\circ$$

42) $\angle P$ and $\angle R$ form a linear pair. $m\angle R = 171^\circ$. Find the $m\angle P$

$$m\angle P = 180^\circ - 171^\circ = 9^\circ$$

Find the measures of the angles whose measures are not shown

