

$\angle 3 = 105$ s
 $\angle 5 = 75$ c
 $\angle 9 = 105$ c-s

$\angle 7 = 43$ v
 $\angle 8 = 43$ a
 $\angle 6 = 137$
 $\angle 9 = 137$

Dec 15-1:18 PM

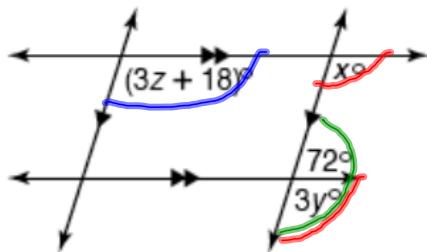
$(3x+5) + (6x-14) = 180$
 $9x - 9 = 180$
 $9x = 189$
 $x = 21$

$y+8 = 3x+5$
 $y+8 = 3(21)+5$
 $y+8 = 63+5$
 $y+8 = 68$
 $y = 60$

$\therefore 6x + (8x+40) = 180$
 $14x + 40 = 180$
 $14x = 140$
 $x = 10$

$(3y-10) + 7y = 180$
 $10y - 10 = 180$
 $10y = 190$
 $y = 19$

Dec 15-1:22 PM

 x

$$\begin{aligned}x &= 3y \\x &= 3(36) \\x &= 108 \\x &+ 72 = 180 \\x &= 108\end{aligned}$$

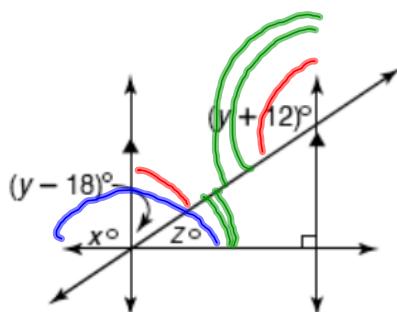
 y

$$\begin{aligned}3y + 72 &= 180 \\3y &= 108 \\y &= 36\end{aligned}$$

 z

$$\begin{aligned}3z + 18 &= x \\3z + 18 &= 108 \\3z &= 90 \\z &= 30\end{aligned}$$

Dec 15-1:22 PM

 x

$$\begin{aligned}x &= 90 \\(y - 18) + (y + 12) &= 180 \\2y - 6 &= 180 \\2y &= 186 \\y &= 93\end{aligned}$$

 y z

$$\begin{aligned}(y - 18) + x + z &= 180 \\z &= y + 12 \\z &= 93 + 12 \\z &= 105\end{aligned}$$

Dec 15-1:22 PM

$\angle 2 = 115$

$\angle 1 = 115$

$\angle 2 + \angle 3 = 180$

$\angle 3 = 148$

$\angle 4 = 148$

Dec 15-1:34 PM

$3x - 15 = 2x + 7 \Rightarrow x = 22$

$\angle 6 + (3x - 15) = 180$

$\angle 6 + 3(22) - 15 = 180$

$\angle 6 + 66 - 15 = 180$

$\angle 6 + 51 = 180$

$\angle 6 = 129$

$\angle 5 + (2x + 7) = 180$

$\angle 5 + 2(22) + 7 = 180$

$\angle 5 + 44 + 7 = 180$

$\angle 5 + 51 = 180$

$\angle 5 = 129$

Dec 15-1:34 PM