

p and q are parallel  
measure angle 1 is 75  
measure angle 2 is 43

Trans

Trans

$\angle 3 = 105$  s  
 $\angle 5 = 75$  c  
 $\angle 4 = 105$  c-s

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

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Trans

Find "x" or "y"

$(3x+5)^\circ$   
 $(y+8)^\circ$   
 $(6x-14)^\circ$

$(8x+40)^\circ$   $7y^\circ$   
 $6x^\circ$   $(3y-10)^\circ$

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

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

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

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

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$x$

$$x = 3y$$

$$x = 3(36)$$

$$x = 108$$


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$$x + 72 = 180$$

$$x = 108$$

$y$

$$3y + 72 = 180$$

$$3y = 108$$

$$y = 36$$

$z$

$$3z + 18 = x$$

$$3z + 18 = 108$$

$$3z = 90$$

$$z = 30$$

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$x$

$$x = 90$$

$y$

$$(y - 18) + (y + 12) = 180$$

$$2y - 6 = 180$$

$$2y = 186$$

$$y = 93$$

$z$

$$(y - 18) + x + z = 180$$

$$z = y + 12$$

$$z = 93 + 12$$

$$z = 105$$

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$32^\circ$   
 $115^\circ$   
 $1$   
 $2$   
 $3$   
 $4$

$\angle 2 = 115$   
 $\angle 1 = 115$

$32 + \angle 3 = 180$   
 $\angle 3 = 148$   
 $\angle 4 = 148$

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$6$   
 $(3x - 15)^\circ$   
 $5$   
 $(2x + 7)^\circ$

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

$\angle 6 + (3x - 15) = 180$   
 $\angle 6 + 3(22) - 15 = 180$   
 $\angle 6 + 66 - 15 = 180$   
 $\angle 6 + 51 = 180$   
 $\angle 6 = 129$

$\angle 5 + (2x + 7) = 180$   
 $\angle 5 + 2(22) + 7 = 180$   
 $\angle 5 + 44 + 7 = 180$   
 $\angle 5 + 51 = 180$   
 $\angle 5 = 129$

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