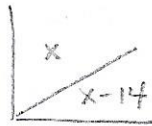


SHOW ALL WORK!

1. The measure of an angle is 14 degrees less than the measure of its complement. Find the measures of the two angles.



$$\begin{aligned} x + x - 14 &= 90 \\ 2x &= 104 \\ x &= 52^\circ \\ x - 14 &= 38^\circ \end{aligned}$$

2. Find two supplementary angles such that the measure of the first angle is 30° less than five times the measure of the second.



$$\begin{aligned} 5x - 30 + x &= 180 \\ 6x &= 210 \\ x &= 35^\circ \\ 5x - 30 &= 145^\circ \end{aligned}$$

3. One supplementary angle is 15 degrees less than twice the other. Find the measure of the two supplementary angles.



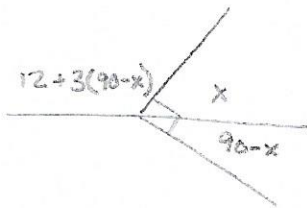
$$\begin{aligned} 2x - 15 + x &= 180 \\ 3x &= 195 \\ x &= 65^\circ \\ 2x - 15 &= 115^\circ \end{aligned}$$

4. One supplementary angle measure is 12 degrees less than twice the measure of the other. Find the measures of the two angles.



$$\begin{aligned} 2x - 12 + x &= 180 \\ 3x &= 192 \\ x &= 64^\circ \\ 2x - 12 &= 116^\circ \end{aligned}$$

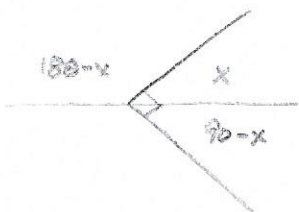
5. The supplement of an angle is 12 more than 3 times the complement. Find the angle, the complement and the supplement.



$$\begin{aligned} \text{angle} &= x \\ \text{comp} &= 90 - x \\ \text{Supp} &= 12 + 3(90 - x) \\ &\quad \uparrow \text{is 12 more 3 times the comp.} \end{aligned}$$

$$\begin{aligned} 12 + 3(90 - x) + x &= 180 \\ 12 + 270 - 3x + x &= 180 \\ -2x &= -162 \\ x &= 81^\circ \text{ Angle} \\ 90 - x &= 9^\circ \text{ Comp.} \\ 12 + 3(90 - x) &= 129^\circ \text{ Supp.} \end{aligned}$$

6. Twice the complement of an angle is 24 degrees less than its supplement. Find the angle, the complement and the supplement.



$$\begin{aligned} \text{angle} &= x \\ \text{Comp} &= 90 - x \\ \text{Supp} &= 180 - x \end{aligned}$$

$$\begin{aligned} 2(90 - x) &= (180 - x) - 24 \\ \text{twice the comp.} \quad \uparrow \text{is} \quad &\quad \text{the supp} \quad \uparrow \text{less 24} \\ 180 - 2x &= 180 - x \\ 24 &= x \\ 24^\circ &= x \text{ Angle} \\ 66^\circ &= 90 - x \text{ Comp} \\ 156^\circ &= 180 - x \text{ Supp} \end{aligned}$$