

14. Find  $x$  if  $x \in \mathbb{Z}$  and  $Z = \{5 - 3x < -10\} \cap \{4x + 6 < 32\}$ .

$$\begin{aligned}5 - 3x &< -10 \\ -3x &< -15 \\ x &> 5\end{aligned}$$

$$\begin{aligned}4x + 6 &< 32 \\ 4x &< 26 \\ x &< \frac{26}{4} = \frac{13}{2} \\ x &< 6\frac{1}{2}\end{aligned}$$

$$5 < x < 6\frac{1}{2}, x \in \mathbb{Z}$$



$$x = 6$$