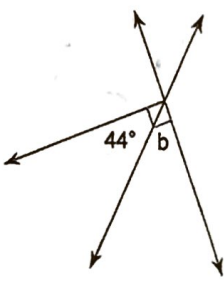
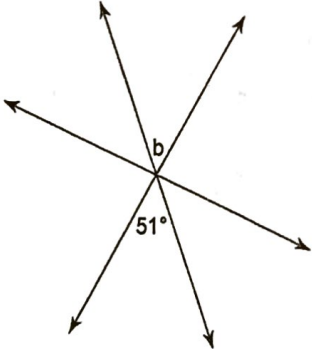


G2: C Level Test Review

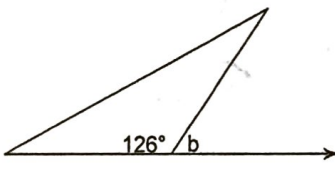
Find the measure of angle b.

1)  **Complementary Angle**

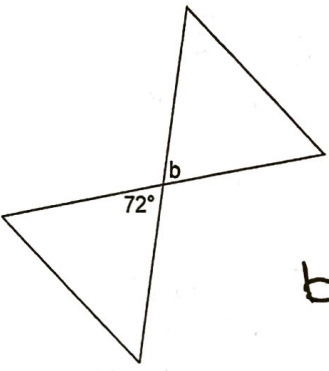
$$\begin{array}{r} 90 \\ - 44 \\ \hline 46 \end{array}$$

2)  **Vertical Angles are (congruent)**

$b = 51^\circ$

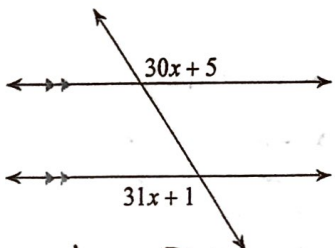
3)  **Supplementary (180°)**

$$\begin{array}{r} 180 \\ - 126 \\ \hline 54 \end{array}$$

4)  **Vertical Angles (congruent)**

$b = 72^\circ$

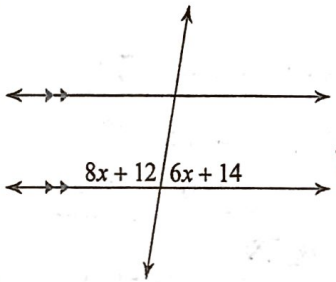
Solve for x.

5)  **Alternate Exterior Angles (congruent)**

$$\begin{array}{r} 30x + 5 = 31x + 1 \\ -30x \quad -30x \\ \hline 5 = x + 1 \\ -1 \quad -1 \\ \hline 4 = x \end{array}$$

check

$$\begin{array}{l} 30(4) + 5 = 31(4) + 1 \\ 120 + 5 = 124 + 1 \\ 125 = 125 \quad \checkmark \end{array}$$

6)  **Linear Pair/supplementary**

$$\begin{array}{r} 8x + 12 + 6x + 14 = 180 \\ 14x + 26 = 180 \\ -26 \quad -26 \\ \hline 14x = 154 \\ \hline 14 \quad 14 \\ \hline x = 11 \end{array}$$

check.

$$\begin{array}{l} 8(11) + 12 + 6(11) + 14 = 180 \\ 88 + 12 + 66 + 14 = 180 \\ 180 = 180 \end{array}$$

7) Same-side interior angles
Supplementary

Check
 $x+78+x+118=180$
 $2x+196=180$
 $-196 \quad -196$
 $\frac{2x}{2} = \frac{-16}{2}$
 $x = -8$

Check
 $-8+78+(-8)+118=180$
 $180=180$

8) Same-side interior Angles
Supplementary

Check
 $105-5+10x=180$
 $100+10x=180$
 $-100 \quad -100$
 $\frac{10x}{10} = \frac{80}{10}$
 $x = 8$

Check
 $105-5+10(8)=180$
 $100+80=180$
 $180=180 \checkmark$

9) Alternate interior angles
congruent

check
 $130 = 27x-5$
 $+5 \quad +5$
 $\frac{135 = 27x}{27 \quad 27}$
 $5 = x$

check
 $130 = 27(5)-5$
 $130 = 135-5$
 $130 = 130 \checkmark$

10) Vertical Angles
congruent

check
 $33x+1 = 32x+4$
 $-32x \quad -32x$
 $x+1 = 4$
 $-1 \quad -1$
 $x = 3$

check
 $33(3)+1 = 32(3)+4$
 $99+1 = 96+4$
 $100 = 100 \checkmark$

11) ~~Triangle~~ Triangle
Angle Sum Theorem
All angles in a triangle add up to 180

check
 $x+52+69+65=180$
 $x+186=180$
 $-186 \quad -186$
 $x = -6$

check
 $-6+52+69+65=180$
 $180=180 \checkmark$

12)

check
 $60+80+4x+4=180$
 $144+4x=180$
 $-144 \quad -144$
 $\frac{4x}{4} = \frac{36}{4}$
 $x = 9$

check
 $60+80+4(9)+4=180$
 $60+80+36+4=180$
 $180=180 \checkmark$

13)

check
 $40x+57+83=180$
 $40x+140=180$
 $-140 \quad -140$
 $\frac{40x}{40} = \frac{40}{40}$
 $x = 1$

check
 $40(1)+57+83=180$
 $180=180 \checkmark$

14)

check
 $90+x+40+55=180$
 $x+185=180$
 $-185 \quad -185$
 $x = -5$

check
 $90+(-5)+40+55=180$
 $180=180 \checkmark$