Solve for the indicated variable.

1.) $F = \frac{a+b+c}{3}$ for b

$b = 3F - a - c$

$F(3) = a+b+c$

$-a \quad -c$

$F(3) - a - c = b$

2.) $x = \frac{2y-z}{4}$ for z

$\cdot 4$

$4x = 2y - z$

$-2y \quad -2y$

$4x - 2y = -z$

$z = -4x + 2y$

3.) $G = \frac{Z(YM-2L)}{2}$ for M

$\cdot 2 \quad \cdot 2$

$\frac{G2}{2} = \frac{Z(YM-2L)}{2}$

$\frac{G2}{Z} = YM - 2L$

$\frac{\frac{2G}{2} + 2L = YM}{Y}$

$M = \frac{\frac{2G}{2} + 2L}{Y}$

4.) **Geometry**: To find the coordinate of the midpoint of a segment with endpoints that have a and b, you can use the formula $m = \frac{a+b}{2}$.

a. Find the coordinate of the midpoint of a segment with endpoints 8.2 and 3.5.

$\frac{11.7}{2}$ 5.85 $= m$

b. Transform the formula to find b in terms of a and m.

$\frac{8.2+b}{2} = 5.85$

$m = \frac{a+b}{2}$ $\quad 2m = a+b$ $\quad 2m - a = b$

c. A segment has midpoint 2.1. One endpoint is -1.7. Find the other endpoint.

$2(2.1) - -1.7 = b$

$b = 5.9$