Solve for C. State restrictions on the variables.

$\frac{1}{3}N(C-P) = RV$

$\frac{N}{3}(C-P) = RV$ Rewrite $\frac{1}{3}N$ as $\frac{N}{3}$

$C-P = RV \cdot \frac{3}{N} = \frac{3RV}{N}$ Multiply both sides by $\frac{3}{N}$

$C = \frac{3RV}{N} + P$ Add P to both sides

$N \neq 0$

Solve for W. State restrictions on the variables.

$G(TW-RC) = \frac{W+B}{G} \cdot G$ Multiply both sides by G

$GTW - GRC = W + B$ Subtract W from both sides and add GRC to both sides
$-W \quad +GRC \quad -W \quad +GRC$

$GTW - W = B + GRC$ Factor W from the left side

$W(GT-1) = B + GRC$ Divide both sides by (GT-1)

$W = \frac{B+GRC}{GT-1}$ $GT-1 \neq 0$, $G \neq 0$

Solve this equation for Q. State restrictions on the variables.

$E(Q+A) - 10 = W(Q-B)$

$EQ + EA - 10 = WQ - WB - EA + 10$
$-WQ \quad -EA + 10 \quad -WQ$

$EQ - WQ = -WB - EA + 10$

$Q(E-W) = -WB - EA + 10$

$\frac{Q(E-W)}{E-W} = \frac{-WB-EA+10}{E-W}$

$Q = \frac{-WB-EA+10}{E-W}$ $E-W \neq 0$

Solve for R. State restrictions on the variables.

$\frac{\sqrt{KR-M}}{A} - B = G + B$
$+B$

Isolate the square root on the left side of the equation by adding B then multiply by A.

$A \cdot \frac{\sqrt{KR-M}}{A} = (G+B)A$

$\left(\sqrt{KR-M}\right)^2 = \left((G+B)A\right)^2$ Square both sides of the equation

$KR - M = ((G+B)A)^2 + M$
$+M$

Add M to both sides

Finally divide both sides by K.

$R = \frac{((G+B)A)^2 + M}{K}$ $K \neq 0$, $A \neq 0$, $KR - M \geq 0$

Solve for C. State restrictions on the variables.

$(C-A)Q = \frac{C+P}{C-A} \cdot (C-A)$ Multiply both sides by (C-A)

$QC - QA = C + P$
$-C + QA \quad -C$

distribute the Q on the left side then subtract C from both sides and add QA to both sides

$QC - C = P + QA$

$C(Q-1) = P + QA$ Factor out the C from the left side

$C = \frac{P+QA}{Q-1}$ $\quad Q-1 \neq 0$ $\quad C-A \neq 0$ divide both sides by Q-1

Solve this equation for Q. State restrictions on the variables.

$\frac{A}{M-P} = \frac{K}{G+Q}$ Write down the cross-products

$\frac{A(G+Q)}{A} = \frac{K(M-P)}{A}$ divide both sides by A

$G - Q = \frac{K(M-P)}{A} - G$
$-G$

Subtract G from both sides

$-1(-Q) = -1\left(\frac{K(M-P)}{A} - G\right)$ Multiply (or divide) both sides by -1

$Q = \frac{-K(M-P)}{A} + G$ $\quad A \neq 0$ $\quad M-P \neq 0$ $\quad G+Q \neq 0$

You can now finish Hwk #4

Hwk #4 Due Tomorrow

Sec 1-3

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Problems 24, 40, 43, 44, 47, 58, 63, 64