

6-3-2 Problem Solving & Tech.

Belinda 3 bonds
average returns
allocation

$$\begin{aligned}x + y + z &= 20,000 \\ .10x + .08y + .06z &= 1340 \\ 3x + 3y - z &= 0\end{aligned}$$

$$\begin{bmatrix} 1 & 1 & 1 \\ .10 & .08 & .06 \\ 3 & 3 & -1 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 20,000 \\ 1340 \\ 0 \end{bmatrix}$$

$$A \cdot X = B$$

$$X = A^{-1} B$$

$$A^{-1} = \begin{bmatrix} -3.25 & 50 & -.25 \\ 3.5 & -50 & .5 \\ .75 & 0 & -.25 \end{bmatrix} \quad A^{-1} B = \begin{bmatrix} 2000 \\ 3600 \\ 15,000 \end{bmatrix}$$

write & label matrices

write matrix equations

WRITE A^{-1} matrix

WRITE $A^{-1}B$

Belinda should invest \$2000 at 10%,
\$3600 at 8% and \$15,000 at 6%.

context

392: 4, 6, 8-10,
calculator

42-47
use inverses
check dimensions