

p430
Ex 14.1 #1, 5

RR $Y = 7 \times 10^{10} \text{ Pa} = \frac{\text{N}}{\text{m}^2}$

$v = ?$ $\rho = 2.7 \times 10^3 \frac{\text{kg}}{\text{m}^3}$

$$v = \sqrt{\frac{Y}{\rho}} = \sqrt{\frac{7 \times 10^{10} \frac{\text{N}}{\text{m}^2}}{2.7 \times 10^3 \frac{\text{kg}}{\text{m}^3}}} = 5100 \frac{\text{m}}{\text{s}}$$

Bulk β liquids Compressibility
 Y solids

$$v = \sqrt{\frac{\beta}{\rho}} \leftarrow \begin{array}{l} \text{beta} \\ \rho \leftarrow \frac{\text{kg}}{\text{m}^3} \\ \text{rho density} \end{array}$$

$$v = \sqrt{\frac{Y}{\rho}}$$

#1 hint

$$v = \frac{d}{t}$$

