SECTION 2.8 ➜ Modeling Using Variation

Direct Variation-➜ *y* varies "*directly*" with/as *x*

k is the constant of variation. Must be found in order to find other value(s) in " modeling" problems

$$y = kx$$

Copy and do Prob. #2 on p.426 below:

Inverse Variation ➜ *y* varies "*inversely*" with/as *x*

$$y = \frac{k}{x}$$

Copy and do Prob. #4 on p.426 below:

Direct Variation with Powers ➜ *y* varies "*directly*" proportional to the *n^{th} power* of *x*
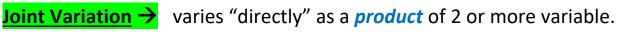
$$y = kx^n$$

Copy and do Prob. #13 on p.426 below:

Combined Variation➜ [combines "*direct*" & "*inverse*" and/or "*joint*" variation.]

"S varies "directly" with *A* and "inversely" with *P"*

$$S = \frac{kA}{P}$$

Copy and do Prob. #10 on p.426 below:

<u>Joint Variation</u> $\rightarrow$ varies "directly" as a ***product*** of 2 or more variable.

$y = \textcolor{red}{k}xz$

Copy and do Prob. #8 on p.426 below:

Copy and do Prob. #21 & #28 on p.427 below:

#21

#28

Do Vocab on p.426 #1 – 7

**Glue these notes to the *end of our Section 2.8 Notes* in compbook AFTER doing each problem.