MR. LAKE

Objectives:

→applications of linear systems

Standards: 2.2, 2.5, 2.8

Applications of Linear Systems

- Chapter 7 Section 4

Word Problem!

13 style B
15 style A

- A store sold 28 pairs of cross-training shoes for a total of $2220. Style A sold for $70 per pair and style B sold for $90 per pair. How many of each style were sold?

$70A + 90B = 2220$

$A + B = 28$

$A + B = 28$

$A = -B + 28$

$70(-B + 28) + 90B = 2220$

$-70B + 1960 + 90B = 2220$

$20B + 1960 = 2220$

-1960

$\frac{20B}{20} = \frac{260}{20}$

$B = 13$

Word Problem!

H.Dog → x

Pop → y

- A group of 40 children attend a baseball game on a field trip. Each child received either a hot dog or bag of popcorn. Hot dogs were $2.25 and popcorn was $1.75. If the total bill was $83.50, how many hot dogs were bought?

$2.25x + 1.75y = 83.50$

$-1.75(x + y = 40)$

27 HD

13 Pop

$2.25x + 1.75y = 83.50$

$-1.75x - 1.75y = -70$

$.5x = 13.5$

$\frac{.5}{.5}x = \frac{13.5}{.5}$

$x = 27$

Word Problem

A: $C = 2h + 12$

B: $C = .5h + 27$

- You have a choice of two different internet companies. Company A charges $12 per month plus $2.00 per hour. Company B charges $27 per month plus $.50 per hour. How many hours would you need to use the Internet per month for the internet services to be the same price?

$.5h + 27 = 2h + 12$

$-.5h \quad -.5h$

$27 = 1.5h + 12$

$-12 \quad -12$

$\frac{15}{1.5} = \frac{1.5h}{1.5}$

$10 = h$

Class Work

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$10R + 15P = 32.75$

$P = .20 + R$

$10R + 15(.20 + R) = 32.75$

$10R + 3 + 15R = 32.75$

$25R + 3 = 32.75$

$-3 \quad -3$

$25R = 29.75$

$R = \$1.19$

$P = \$1.39$

Homework

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