8/27/2012 - Sec 2.3 (cont.) Math 1010

Sec 2.1 55

$$\left(\frac{3x}{4} + \frac{5x}{2} = 13\right) * 4$$

$$\frac{3x}{4} \cdot \frac{4}{1} + \frac{5x}{2} \cdot \frac{2}{4} = 13 \cdot 4$$

$$3x + 10x = 52$$

$$\frac{13x}{13} = \frac{52}{13}$$

$$x = 4$$

$$\frac{3 \cdot 4}{4} + \frac{5 \cdot 4}{2} = 13$$

$$\frac{12}{4} + \frac{20}{2} = 13$$

$$3 + 10 = 13 \checkmark$$

#60 $$\left(\frac{3x+2}{7}\right) \cdot \frac{5}{1} \cdot \frac{35}{1} - \left(\frac{x+4}{5}\right) \cdot \frac{7}{1} \cdot \frac{35}{1} = 2 \cdot 35$$

$$(3x+2) \cdot 5 - (x+4) \cdot 7 = 70$$

$$5(3x+2) - 7(x+4) = 70$$

$$15x + 10 - 7x - 28 = 70$$

Sec 2.2 #10

$S = 2\pi r h + 2\pi r^2$ Solve for h

S: stay
$2\pi r h$: stay
$2\pi r^2$: move

$-2\pi r^2$

$-2\pi r^2$

0

Can you hear me?

Yes

$\frac{S - 2\pi r^2}{2\pi r} = \frac{2\pi r h}{2\pi r}$

if $S = 10h$

$\boxed{\frac{S - 2\pi r^2}{2\pi r} = h}$

$\frac{S}{2\pi r} - \frac{2\pi r^2}{2\pi r} = \boxed{\frac{S}{2\pi r} - r = h}$

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$$u = f \cdot \frac{K(K+1)}{n(n+1)}$$

u = unearned interest

n = # of scheduled payments

K = # of payments ahead

f = total finance charge

$n = 36$

$f = 700$

$u = ?$

$K = 4$

See 2.3 cont.

Applications of Linear Equations

Steps to solving Applied Problems

1. Read the problem, several times if necessary, determine what info. is given, what needs to be found
2. Assign a variable to represent an unknown value
   - use a sketch, diagram, or table as necessary
   - write down what the variable represent

3. Write an equation using the variable
4. Solve
5. State the answer
6. Check with words in the original problem, if our answer makes sense

Now try ~~Exercise # 4~~

Drew Brees threw 4 more than Kurt Warner together total was 64

K = Kurt

D = Drew = K + 4

$K + K + 4 = 64$

$2K + 4 = 64$

$-4 \quad -4$

$\frac{2K}{2} = \frac{60}{2}$

$K = 30$

* Kurt threw 30 passes
Drew threw 34 passes

Example 6: $I = rP$ ← Simple interest for 1 year

Invested $40000 total

pay 6%, 4%

total interest = $2040

	Principal	Rate	= Interest
6% →	x	.06	.06x
4% →	40,000 − x	.04	.04(40000 − x)

40 total
30 @ 6
? @ 4

2040 ←

$$.06x + .04(40{,}000 - x) = 2040$$

$$.06x + 1600 - .04x = 2040$$

$$.02x + 1600 = 2040$$

$$-1600 \quad -1600$$

$$\frac{.02x}{.02} = \frac{440}{.02}$$

$$x = \$22{,}000$$

$22,000	@	6%
$18,000	@	4%

#55

10 L of 4%
mixed with 10% ← how much

end goal is 6% solution

4%	+	10%	=	6%
10		X		10+X

$$.04(10) + .10X = .06(10+X)$$

$$.4 + .10X = .6 + .06X$$
$$-.4 \quad -.06X \quad -.4 \quad -.06X$$

$$\frac{.04X}{.04} = \frac{.2}{.04}$$

$$X = 5 \text{ L}$$

Sec 2.3