Welcome to Math 60 ☺

Course Introduction — 10-11:30
Section 1.1 — MWF

How can we make this a great math class?

- energetic
- direct – to the point
- feel enthusiastic
- simple
- fun
- respect, support friendly
- mix of activities
- smiles
- cell phones – vibrate or off calls in the hall
- text – ~~at~~ in the hall

Section 1.1 Notes — Intro to Algebra, variables and mathmatical models

Realm ~~Land of~~ Variables

What is a variable? A letter that represents a number. usually unknown. x or y

Land of Expressions: A combination of variables, numbers and operations no equal signs.

$3x$ or $3 \cdot x$

$x+7$ $2x+7y$

$x-7$

3^x

Evaluate expressions:

ex: 2. evaluate for $x=4$

$$x+10$$
$$= 4+10$$
$$= 14$$

6. $6x$
$$= 6 \cdot 4 \text{ or } 6(4)$$
$$= 24$$

8. $\frac{36}{x}$
$$= \frac{36}{4}$$
$$= 9$$

14. $\dfrac{5x+52}{3x}$

$= \dfrac{5(4)+52}{3(4)}$

$= \dfrac{20+52}{12}$

$= \dfrac{72}{12}$

$= 6$

Parentheses
Exponents
M
D → Mult + Division from Left to Right
A
S → Add + Subtract from left to right

22. $x=7$ and $y=5$

$\dfrac{50}{y} - \dfrac{14}{x}$

$= \dfrac{50}{5} - \dfrac{14}{7} = 10-2=8$

24. $\dfrac{2y-x+24}{2x-y}$

$= \dfrac{[2(5)-7+24]}{[2(7)-5]}$

$= \dfrac{10-7+24}{14-5}$

$= \dfrac{3+24}{9}$

$= \dfrac{27}{9}$

Translation

26. $x+6$ or $6+x$

28. $x-6$ order matters in subtraction

36. $5x-3$ p.4 chart

42. $\frac{30}{x}+4$

Determine whether a number is a solution to an equation

2 expressions with an equal sign

equations

44. $x+17=22$; 5

$5+17 \stackrel{?}{=} 22$

$22 = 22$ 5 is a solution

52. $3m+4=19$; 6

$3(6)+4 \stackrel{?}{=} 19$

$18+4 \stackrel{?}{=} 19$

$22 \neq 19$ 6 is not a solution

Translate equations

66. $2x+9$ is $=29$ don't need to solve

Mathmatical models

86. a) 1998: $p = 7.4(h) + 6$

$= 7.4(3) + 6$

$= 22.2 + 6$

$= 28.2$

The percentage of adults who got 7–7.9 hours of sleep is 28.2%.

The model overestimates the graph by .2%.