

Math 2303  
Summer 2008  
Homework #12

- Solve for x:
  - $\frac{9}{4x} = \frac{6}{2}$
  - $\frac{x+1}{2x+3} = \frac{2}{3}$
  - $\frac{6}{11} = \frac{27}{3x-2}$
  - $\frac{7}{x-3} = \frac{8}{2x}$
- The ratio of the weight of an object on Earth to the weight of the same object on Pluto is 100 to 3. If an elephant weighs 4100 pounds on Earth, find the elephant's weight on Pluto.
- If a 120 mile trip takes  $8\frac{1}{4}$  gallons of gas, how many gallons of gas are needed for a 300 mile trip?
- A map is scaled so that 1 inch equals 150 miles. If two cities are  $5\frac{1}{2}$  inches apart on the map, how many miles separate the cities?
- One kilogram is approximately equal to 2.2 pounds. If an elevator can hold 750 kilograms, how much weight, in pounds, can the elevator hold?
- Given the formula  $F = \frac{9}{5}C + 32$ , find F when  $C = 40$ .
- Given the formula  $c = \sqrt{a^2 + b^2}$ , find c when  $a = 5, b = 12$ .
- Given the formula  $m = \frac{a+b+c}{3}$ , find b when  $a = 70, c = 60$  and  $m = 80$ .
- Given the formula  $z = \frac{x-\mu}{\sigma}$ , find  $\mu$  when  $z = 2.5, x = 42.5, \sigma = 2$ .
- Given the formula  $A = P(1+rt)$ , find P when  $A = 3600, r = 0.04, t = 5$ .