Pseudo-quadratic

Solve the following equation.

$(x+3)^2 = x^2+6$

$(x+3)^2 = (x+3)(x+3)$

$(a+b)^2 = a^2+2ab+b^2$

$= x^2+6x+9$

x

$(a+b)^3 = a^3+3a^2b+3ab^2+b^3$

$(a+b)^4 = a^4+4a^3b^1+6a^2b^2+4a^1b^3+b^4$

a^4b^0 $+a^0b^4$

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1

$(x+3)^2 = x^2+6$

$x^2+6x+9 = x^2+6$

$6x+9 = 6$

$6x = -3$

$x = -\frac{1}{2}$

$x \in \{-\frac{1}{2}\}$. singleton Set.

Solve the following equation.

$\frac{x+3}{x+6} = \frac{x+2}{x+3}$ $\Rightarrow$ LCD $= (x+3)(x+6)$

$\left(\frac{x+3}{x+6}\right)\left(\frac{x+3}{x+3}\right) = \left(\frac{x+2}{x+3}\right)\left(\frac{x+6}{x+6}\right)$

It's an "=" so we can drop the denominator at this point

$x^2+6x+9 = x^2+8x+12$

$6x+9 = 8x+12$

$-8x-9 = -8x-9$

$-2x = 3$

$x = -\frac{3}{2}$ $\Rightarrow$ $x \in \{-\frac{3}{2}\}$

$x^2+6x+2x+12$

$(x+2)(x^2+5x-7)$

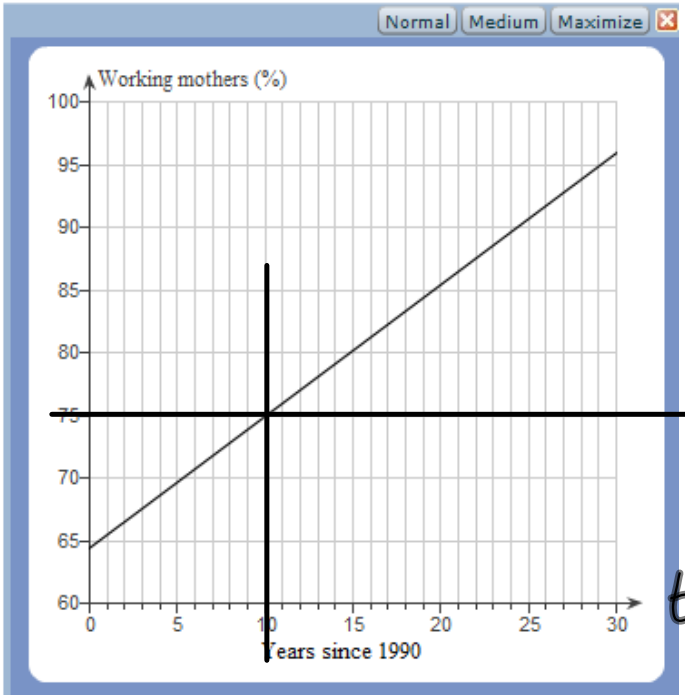
$\frac{A}{B} = \frac{C}{B} \Rightarrow$

$A = C$

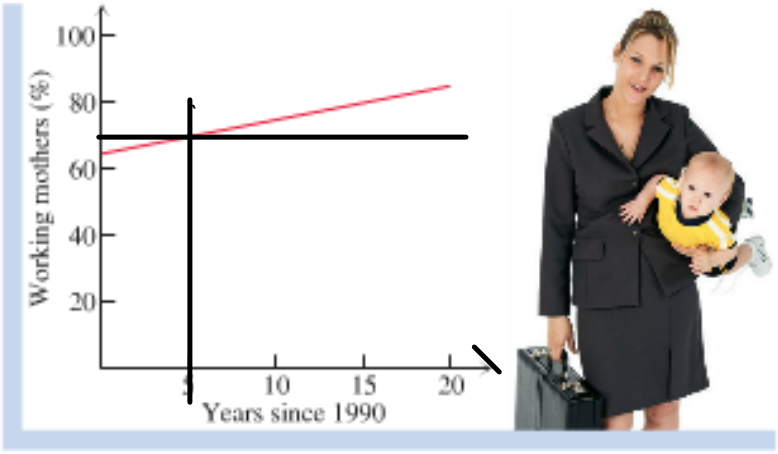
a) Use the accompanying graph to estimate the year in which 75% of the moms had day jobs. were in the work force.

Let x = the year we seek.

Then x = 2000.



t = 10, and
t = the # of years since 1990
Year is 1990 + 10 = 2000



Aug 24-10:29 AM

A surfboard shaper has to limit the cost of development and production to \$276 per surfboard. He has already spent \$58,760 on equipment for the boards. The development and production costs are \$146 per board. The cost per board is $\frac{146x + 58,760}{x}$ dollars. Determine the number of boards that must be sold to limit the final cost per board to \$276.

How many boards must be sold to limit the cost per board to \$276?

Not sure about this one. I *think* that most of the numbers here are just showing you what went into the cost-per-board function. Our focus is just on the cost per board. With the tools we have, our best bet might be just to build a table. We basically want that function to be less than \$276.

x = # of boards

$$C(x) = \frac{146x + 58,760}{x} \quad \text{SET} \quad 276$$

LCD = x

$$\Rightarrow \quad \frac{146x + 58,760}{x} = \left(\frac{276}{1}\right)\left(\frac{x}{x}\right)$$

$$146x + 58760 = 276x$$
$$-276x \qquad\qquad = -276x$$

etc.

Section 1.2 in Earnest

Solve

$Cx + Gy = K$, for x.

$-Gy = -Gy$

$Cx = K - Gy$

$\frac{Cx}{C} = \frac{K - Gy}{C}$

$x = \frac{K - Gy}{C}$

Solve for m.

$G = \frac{1}{7} p(m - q)$ LCD: 7

$\frac{7G}{7} = \frac{p(m-q)}{7}$

$7G = p(m-q)$

$7G = pm - pq$

$pm - pq = 7G$

$+pq = +pq$

$pm = 7G + pq$ ✓

$m = \frac{7G + pq}{p}$ ✓

Section 1.2 is up for Monday. Please begin work on 1.2 before class on Monday:
Read
Try a few problems
Come to class armed with questions.

What is the simple interest rate if $134.49 in interest is earned on a deposit of $1925.01 in one year?

Cameron and his friend John bought a used circus carousel for $69,733, including sales tax. If the sales tax rate is 7%, then what was the cost of the carousel before the tax?

Aug 24-9:40 AM

You invested $15,000 in two accounts paying 3% and 7% annual interest, respectively. If the total interest earned for the year was $570, how much was invested at each rate?

Aug 24-9:43 AM