$\frac{3}{4}x - 2 = \frac{1}{2}x + 1$

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

$1/4x - 2 = 1$

$+2 \quad +2$

$\frac{1/4x}{1/4} = \frac{3}{1/4}$

$x = 12$

Jan 6-12:13 PM

$\frac{3}{2}n + 4 = \frac{3}{6} - 2n$

$+2n \qquad +2n$

$3.5n + 4 = 3/6$

$-4 \quad -4$

$\frac{3.5n}{3.5} = \frac{-3.5}{3.5}$

$n = -1$

Oct 28-9:44 AM

Variables on BOTH Sides Word Problems

* The Same means Equal *

Set-up 2 expressions & Set equal to each other.

*Don't forget to Label *

Oct 25-1:10 PM

1. PLUMBING A1 Plumbing Service charges $35 per hour plus a $25 travel charge for a service call. Good Guys Plumbing Repair charges $40 per hour for a service call with no travel charge. How long must a service call be for the two companies to charge the same amount?

A1 = GG

$35x + 25 = 40x$

$-35x \quad -35x$

$25 = 5x$

$\frac{25}{5} = \frac{5x}{5}$

$x = 5$ hours

2. EXERCISE Mike's Fitness Center charges $30 per month for a membership. All-Day Fitness Club charges $22 per month plus an $80 initiation fee for a membership. After how many months will the total amount paid to the two fitness clubs be the same?

MF = AD

$30x = 22x + 80$

$-22x \quad -22x$

$8x = 80$

$\frac{8x}{8} = \frac{80}{8}$

$x = 10$ months

Oct 25-1:09 PM

3. SHIPPING The Lone Star Shipping Company charges $14 plus $2 a pound to ship an overnight package. Discount Shipping Company charges $20 plus $1.50 a pound to ship an overnight package. For what weight is the charge the same for the two companies?

LS=DS $14+2x=20+1.5x$

$-1.50x \quad -1.5x$

$14+0.5x=20$

$-14 \quad -14$

$0.5x=6$

$0.5 \quad 0.5$

$x=12$ pounds

4. MONEY Deanna and Lisa are playing games at the arcade. Deanna started with $15, and the machine she is playing costs $0.75 per game. Lisa started with $13, and her machine costs $0.50 per game. After how many games will the two girls have the same amount of money remaining?

D=L $15-0.75x=13-0.5x$

$+0.75 \quad +0.75x$

$15=13+0.25x$

$-13 \quad -13$

$2=0.25x$

$0.25 \quad 0.25$

$x=8$ games

Oct 25-1:09 PM

Bell Work

5. MONEY The Wayside Hotel charges its guests $1 plus $0.80 per minute for long distance calls. Across the street, the Blue Sky Hotel charges its guests $2 plus $0.75 per minute for long distance calls. Find the length of a call for which the two hotels charge the same amount.

$1+0.8x=2+0.75x$

$-0.75x \quad -0.75x$

$1+0.05x=2$

$-1 \quad -1$

$0.05x=1$

$0.05 \quad 0.05$

$x=20$ minutes

6. COLLEGE Duke is a part-time student at Horizon Community College. He currently has 22 credits, and he plans to take 6 credits per semester until he is finished. Duke's friend Kelly is also a student at the college. She has 4 credits and plans to take 12 credits per semester. After how many semesters will Duke and Kelly have the same number of credits?

$22+6x=4+12x$

$-6x \quad -6x$

$22=4+6x$

$-4 \quad -4$

$18=6x$

$6 \quad 6$

$x=3$ semesters

Oct 25-1:09 PM