

Unit 3

L1 Equations



Equalities (=) $3x + 4 = 10$

- Both sides of the equation are equal
- There is one unique solution for x that would make the equation true.

1

Solving for X (aka isolating X)

**** every operation you do to one side of the equation, you must do to the other side as well, it is like keeping the scale balanced****



Ex 1: Level I

$$x - 5 = -6 \quad \underline{\hspace{1cm}}$$

Ex 2: Level II

$$3x + 3 = 9 \quad \underline{\hspace{1cm}}$$

2

Ex 3: Level III

$$5x + 25 = -3x - 23$$

Note that we isolate our unknown cancelling the operations in the order of SAMDEB (backwards of BEDMAS)

3

Ex 4: Level IV

$$6(x - 2) = -4(2x + 1) \quad \underline{\hspace{1cm}}$$

4

Ex 5: Level V

$$\frac{3x + 5}{4} = \frac{4x + 10}{2}$$

5

Ex 6:

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



1. Put all fractions over a common denominator;
2. Multiply by the denominator to cancel it

6

Word Problems:

- #7) Nancy is 2 years older than her brother Eric. In 5 years, the sum of their ages will be equal to 40 years. What is the present age of each?

	Eric	Nancy
Now		
In 5 years		

8

- # 8) Denise, Evelyn and Fran work at a convenience store. They earn an hourly rate of \$8. In one week, Denise worked 4 hours more than Evelyn whereas Fran worked 9 hours less than Denise. Together, they earned a total salary of \$856. What was Fran's salary that week?

Evelyn's hours:
Denise's hours:
Fran's hours:

9

Practice:

Day 1: 3.1 # 1—4 (ace in each)



Day 2: 3.2 # 1—9

10