

a. Solve for x

1.  $3x = 6$  ;  $x=6/3$  ;  $x=2$

2.  $15x = 30$ ;  $x=30/15$  ;  $x=2$

3.  $2+x = 9$ ;  $x=9-2$  ;  $x=7$

4.  $8 - x = 6$ ;  $-x = 6-8$  ;  $-x = -2$  ;  $x=2$

5.  $2x + 6 = 16$ ;  $2x = 16-6$  ;  $2x = 10$  ;  $x=10/2$  ;  $x=5$

6.  $8 = x - 3$ ;  $x-3 = 8$  ;  $x = 8+3$  ;  $x = 11$

7.  $8 = x + 9$ ;  $x+9 = 8$  ;  $x = 8 - 9$  ;  $x = -1$

8.  $12 = 2x + 2$ ;  $2x + 2 = 12$  ;  $2x = 12 - 2$ ;  $2x=10$ ;  $x=10/2$ ;  $x=5$

9.  $20x+3 = 43$ ;  $20x = 43-3$ ;  $20x=40$ ;  $x=40/20$ ;  $x = 2$

b. Form linear equations from these word problems, then solve the equation, give an answer in context.

1. There are cows in a field, they have 40 legs altogether, each cow has four legs. How many cows are there in the field? Let c represent the number of cows.  $4c=40$ ;  $c=40/4$ ;  $c=10$ ; there are 10 cows in the field.

2. Polly has \$10 and spends some of her money, when she gets home she has \$4 left. How much did Polly spend? Let p represent the amount of money Polly spent.  $10-p=4$ ;  $-p=4-10$ ;  $-p=-6$ ;  $p=6$ ; Polly spent \$6.

3. There are 33 desks in my classroom; normally one student sits at each desk. Today seven desks do not have a student. How many students are in my class today? Let s represent the number of students in my class;  $33-7=s$ ;  $s=33-7$ ;  $s=26$ ; there are 26 students in my class.