Problem of the Day: Solve the equation. cd=4
$\frac{3}{4}x + 8 = \frac{1}{2}x + 11$ $3x+32=2x+44$ $-2x \quad -2x$
Plan for the Day: Daily integer quiz update
Go over last week's test $x+32=44$ $-32 \quad -32$
Notes on writing equations from story problems
Homework Week 3 and Solv. Eq. with Rationals wksht are due tomorrow $x=12$
Objective: We will be able to solve equations with rational numbers!!
Happy Birthday to Breanna Couch!!
Happy Birthday to Shelby Bird!!

1. $x=-5$
2. $x=-12$
3. $x=-6$
4. $-2=x$
5. $x=-2$
6. $x=8$
7. $x=6$
8. $-7=x$
9. $x=0$
10. $x=-8$

9. $2x-5=-7x-5$ $+7x \quad +7x$ $9x-5=-5$ $+5 \quad +5$ $\frac{9x}{9}=\frac{0}{9}$ $x=0$

10. $11+3x=-x-5$ $-1x \quad -1x$ $-x+2x=-5$ -11 $2x=-16$ $x=-8$

11. $-2x+1=-4x+9$ $x=4$

CADEB

17. constant
18. equation
19. coefficient
20. variable

DDC

B
A
C

Steps to writing an equation given a verbal expression:
1. figure out what the problem is asking for because that will be what your variable represents
2. determine what operation(s) are being used
3. plug in the numbers from the story problem
4. solve (if needed) and check your answer

Words that mean math operations:
Addition - plus, the sum of, increased by, total, more than, added to, and
Subtraction - minus, the difference of, decreased by, fewer than, less than, subtracted from
Multiplication - times, the product of, multiplied by, twice, of, per
Division - divided by, the quotient of, separate into equal parts
Equals - is, are, was, will be, are the same as

Order is important when writing subtraction and division problems.
1. if it is a subtraction problem using any words but less than or subtracted from, write the numbers in the order given
2. if is a subtraction problem using the words less than or subtracted from, write the numbers in the reverse order
3. if it is a division problem, write the numbers in the order given

Example 1: Write and solve as a mathematical sentence.
Twice a number increased by five is equal to 19.

Example 2: Write and solve as a mathematical sentence.
Four less than the quotient of a number and three is the same as 5.

Example 3: Write and solve the equation.
Six times a number increased by three is 15 less than nine times the number. What is the number?

Example 4: Write and solve the equation.
One cell phone carrier charges $40 for service and $15 for every gigabyte of data used. Another company charges $30 for service and $20 for every gigabyte of data used. For how many gigabytes of data do the two companies charge the same amount?

Example 5: Write and solve the equation.
Chad goes to Sonic during happy hour to get his friends some small limeades for $0.85 and gets a jumbo popcorn chicken for $5 for himself. Marcus goes the next day to get the same number of people small sweet teas for $0.60 and gets a family pack of mozzarella sticks for $8. How many drinks do they both order if they spend the same amount of money?