3. $(1, 1)$

4. $(5, 6)$

5. $(-9, -11)$

6. $(19, 16)$

7. $(2, 1)$

10. $(-17, 5)$

11. $(5, 6)$

12. $(-6, 10)$

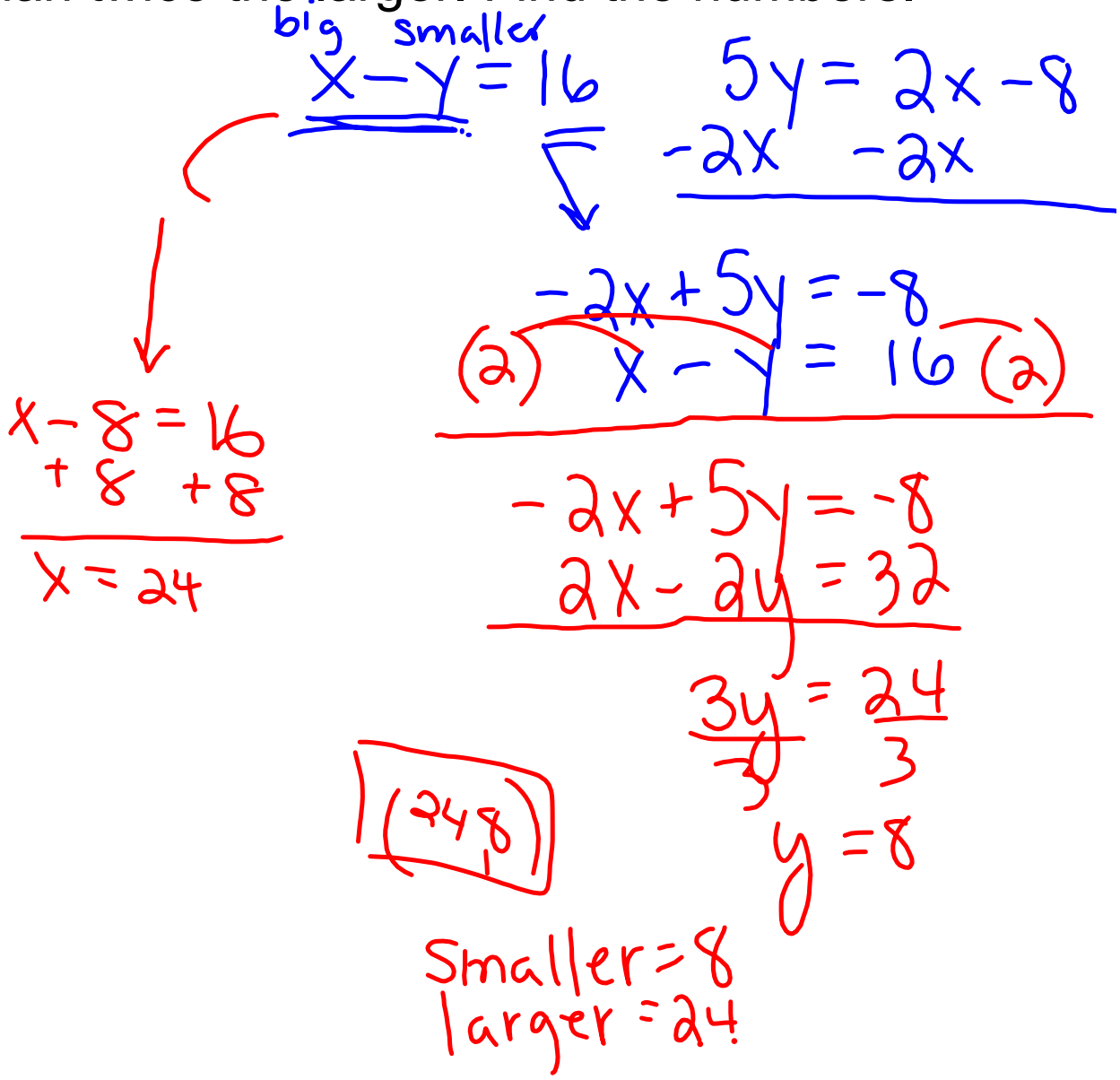
13. $(4, 4)$

Word Problem Day!

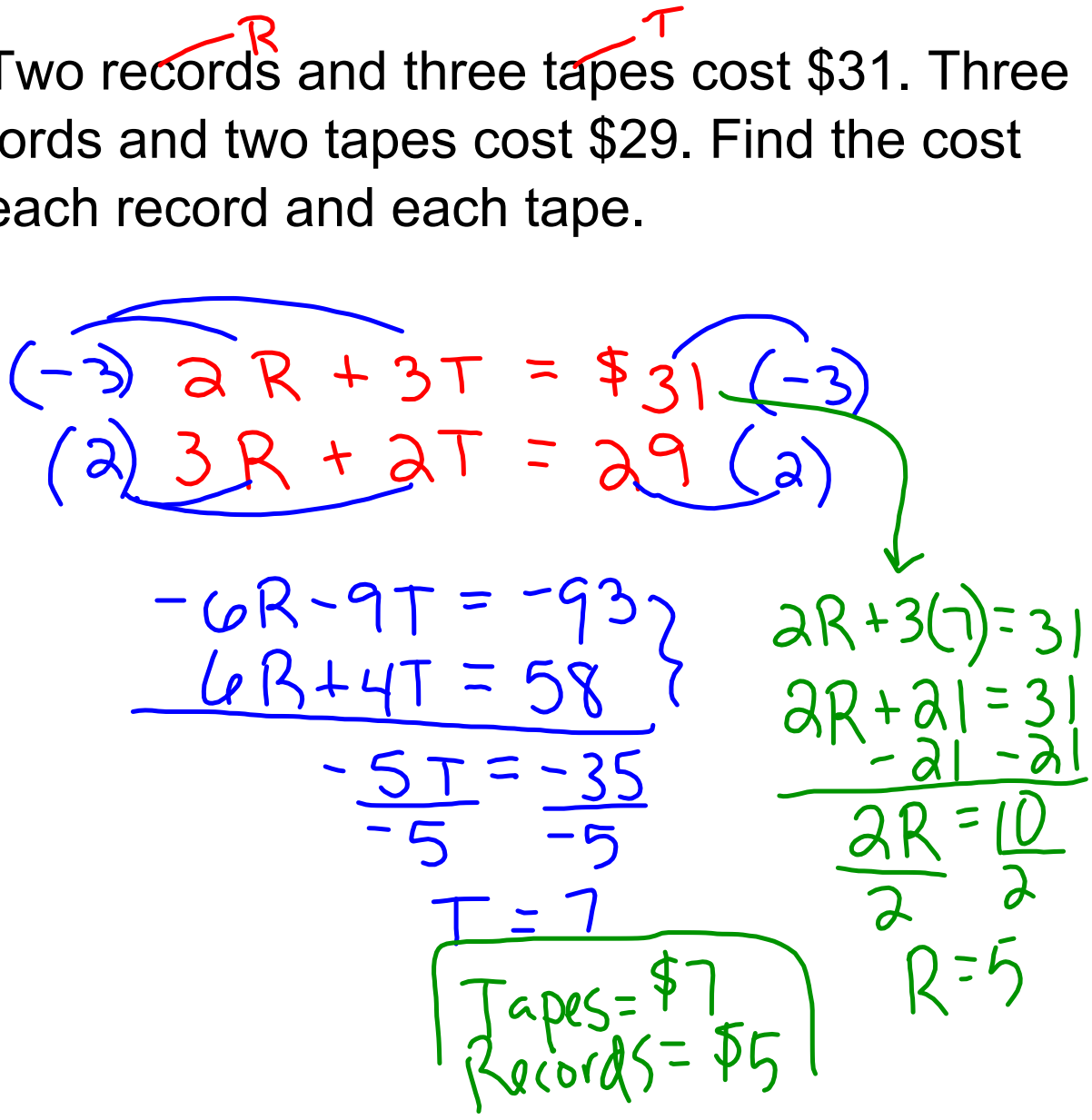
Today we will go over the even problems for notes and your homework will be the odd problems:)

What kind of monkey can fly?

2. The difference between two numbers is 16. Five times the smaller is the same as 8 less than twice the larger. Find the numbers.



4. Two records and three tapes cost $31. Three records and two tapes cost $29. Find the cost of each record and each tape.



6. A group of students go out for lunch. If two have hamburgers and five have hot dogs, the bill will be $8.00. If five have hamburgers and two have hot dogs, the bill will be $9.50. What is the price of a hamburger?

X = hamburgers
Y = hotdogs

$(-2)\ 2x + 5y = 8.00$
$(5)\ 5x + 2y = 9.50$

$-4x - 10y = -16.00$
$25x + 10y = 47.50$

$\frac{21x}{21} = \frac{31.50}{21}$

$x = \$1.50$ hamburger

8. A shipment of TV sets, some weighing 30 kg each and the others weighing 50 kg each, has a total weight of 880 kg. If there are 20 TV sets all together, how many weigh 50 kg?

$x = 30\,kg$

$\boxed{Y} = 50\,kg$

$30x + 50y = 880$

$(-30)\quad x + y = 20 \quad (-30)$ ←

$$\begin{array}{r} 30x + 50y = 880 \\ -30x - 30y = -600 \\ \hline 20y = 280 \end{array}$$

$$\frac{20y}{20} = \frac{280}{20}$$

$y = 14$ TV's weighing 50Kg

2. Ms. Lynch has 21 coins in nickels and dimes. Their total value is $1.65. How many of each coin does she have?

n d

$(-.05)\quad n + d = 21 \quad (-.05)$

$.05n + .10d = 1.65$

$-.05n + -.05d = -1.05$

$.05n + .10d = 1.65$

$\frac{.05d}{.05} = \frac{.60}{.05}$

$d = 12$ dimes

$n = 9$ nickels

$n + d = 21$

$n + 12 = 21$

$-12 \quad -12$

$n = 9$

4. The total value of the $1 bills and $5 bills in a cash box is $124. There are 8 more $5 bills than $1 bills. How many of each are there?

$x = \$1$

$y = \$5$

$1x + 5y = 124$

$x + 8 = y$ ← substitution

$x + 5(x+8) = 124$

$x + 5x + 40 = 124$

$6x + 40 = 124$

$-40 \quad -40$

$\frac{6x}{6} = \frac{84}{6}$

$x = 14$ one dollar bills

$y = x + 8 = 14 + 8 = 22$ five dollar bills

6. Joe Lick bought some 20-cent and 25-cent stamps. He bought 32 stamps in all, and paid $7.40 for them. How many stamps of each kind did he buy?

x = 20¢ Stamps

y = 25¢ Stamps

$(-.20)\ x + y = 32\ (-.20)$ ←

$.20x + .25y = 7.40$

$-.20x - .20y = -6.40$

$.20x + .25y = 7.40$

$\frac{.05y}{.05} = \frac{1.00}{.05}$

$y = 20 \rightarrow$ 25¢ stamps

$x + y = 32$

$x + 20 = 32$

$-20 \quad -20$

$x = 12 \rightarrow$ 20¢ stamps

8. Romeo bought a mixture of 20-cent, 35-cent, and 50-cent valentines. The number of 20-cent valentines was 1 more than twice the number of 35-cent valentines, and the number of 50-cent valentines was 2 less than the number of 35-cent ones. If he spent $4.20 all together, how many valentines of each kind did he buy?

$\rightarrow X = 20¢$

$\rightarrow Y = 35¢$

$Z = 50¢$

$X = 2Y + 1$ $\quad x = 2(4) + 1 = 8 + 1 = 9$

$Z = Y - 2$ $\quad z = 4 - 2 = 2$

$.20X + .35Y + .50Z = 4.20$

$.20(2Y+1) + .35Y + .50(Y-2) = 4.20$

$.4Y + .2 + .35Y + .5Y - 1 = 4.20$

$1.25Y - .8 = 4.20$

$+.8 \qquad +.8$

$\frac{1.25Y}{1.25} = \frac{5.00}{1.25}$

$Y = 4$ (35¢ val)

$X = 9$ (20¢ val)

$Z = 2$ (50¢ val)

Homework: Complete the odd problems on both "What kind of Monkey can fly?" and "How did the doe win the bid animal race?"