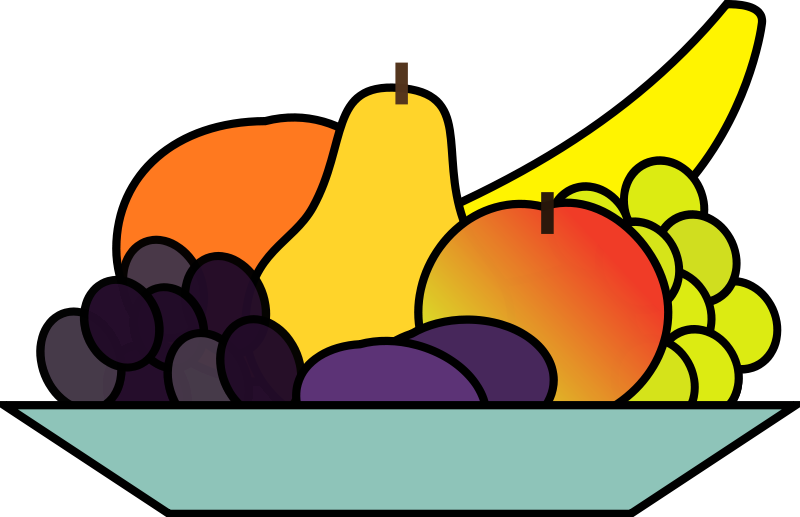
**Fantastic FRUIT!**



Thirteen plums weigh as much as two apples and one pear.

Four plums and one apple have the same weight as one pear.

**How many plums have the weight of one pear?**

\*If thirty grapes equal the weight of one apple, how many grapes have the same weight as one plum?

\*\*How many grapes would it take to equal the weight

of one pear?

* Model your thinking with a picture, chart, table, equation(s), etc.
* Identify the given information, as well as the goal (what are you trying to find?)
* Be able to justify your reasoning.
* Prepare to share your work with the class
* Be ready to question the work of your classmates ☺

One possible approach (algebraic):

**Using a system of equations**

p = plum 13p = 2a + r **4p + a** = r

a = apple

r = pear

…using substitution…

13p = 2a + **4p + a**

13p = 3a + 4p

- 4p - 4p

9p = 3a

So….. 3p = a 3 plums = 1 apple

Then, going back to the second equation:

4p + a = r

…and substituting 3p in place of a: 4p + 3p = r

…we find that: 7p = r 7 plums = 1 pear

What about the GRAPES?!?

Well, we know that 30 grapes = 1 apple.

Going back to our relationship between plums and apples: 3p = a

…substitute 30 grapes in place of the apple: 3p = 30g

We now know that each plum equals 10 grapes. p = 10g

Going back to the second equation from the system in the blue box: 4p + a = r

…and substituting 10g in place of p, and 30g in place of a: 4(10g) + 30g = r

…simplify… 40g + 30g = r

…keep simplifying… 70g = r

SO!

A Pear is equal to the weight of 70 grapes ☺