

Week 14

Friday 26th June 2020

Year 6 One-Step Algebraic Rules - Problem Solving and Reasoning

Find a Rule – One Step

1a. Jill has four more pets than Lark.

If Lark has x pets, which statement is true?

A) Jill has $x - 4$ pets

B) If Jill has 10 pets, Lark has 14

C) Jill has $x + 4$ pets



Find a Rule – One Step

1b. Molly has twice as many shoes as James.

If James has y shoes, which statement is true?

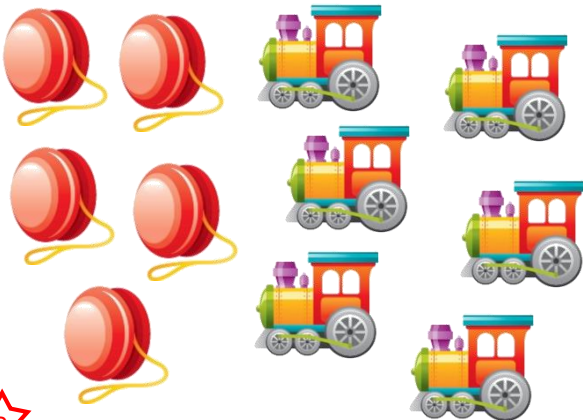
A) Molly has $2y$ shoes

B) Molly has $2 + y$ shoes

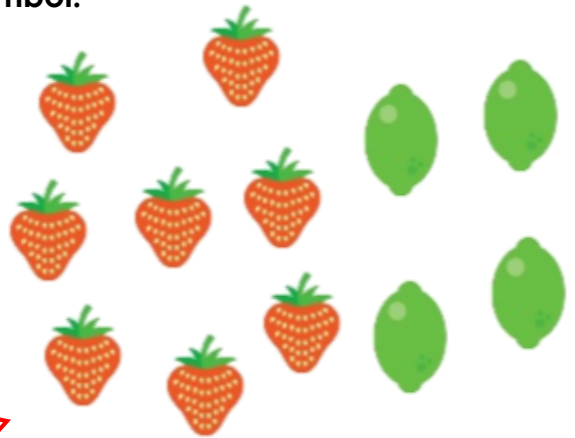
C) If Molly has 5 shoes, James has 10



2a. Write an algebraic expression to show how many yoyos there are if trains equals a . Use an addition or subtraction symbol.

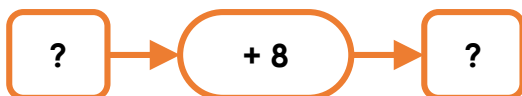


2b. Write an algebraic expression to show how many limes there are if strawberries equals y . Use an addition or subtraction symbol.



3a. Four of the cards are inputs or outputs of the function machine.

Circle the odd one out.



Explain your reasoning.



3b. Four of the cards are inputs or outputs of the function machine.

Circle the odd one out.



Explain your reasoning.



Find a Rule – One Step

4a. Sandra has three times fewer spoons than Kyle.
If Sandra has x spoons, which of these are true?

A) Kyle has $3x$ spoons

B) Kyle has $x + x + x$ spoons

C) If Kyle had 18 spoons, Sandra had 54



Find a Rule – One Step

4b. Laura has seven fewer counters than D'Angelo.
If D'Angelo has c counters, which of these are true?

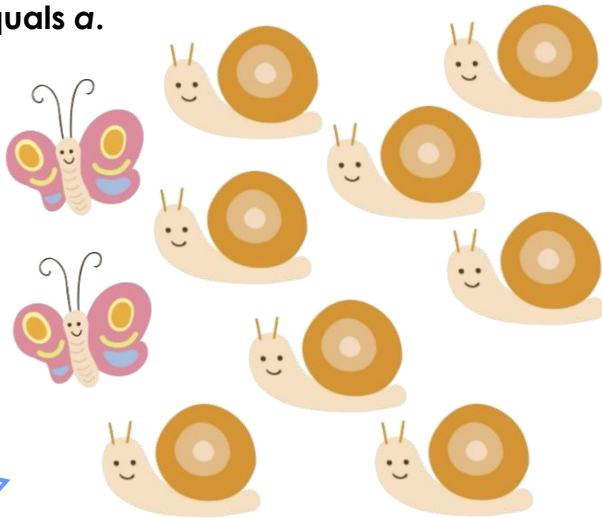
A) Laura has $c - 7$ counters

B) Laura has $c + 7$ counters

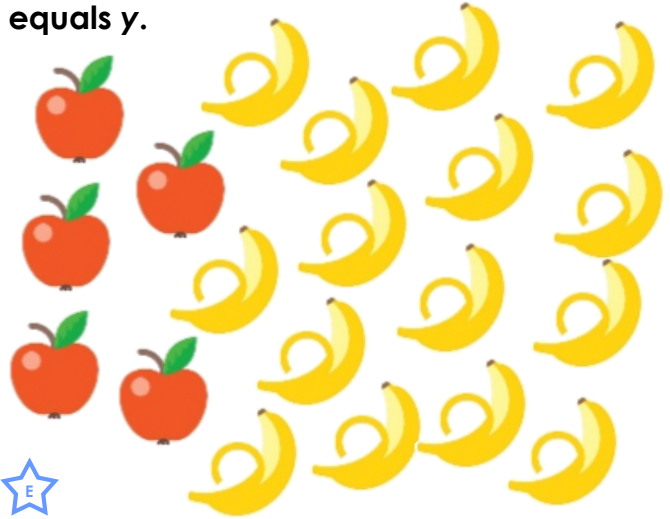
C) If D'Angelo has 18 counters, Laura has 25



5a. Write an algebraic expression to show how many butterflies there are if snails equals a .



5b. Write an algebraic expression to show how many bananas there are if apples equals y .



6a. Four of the cards are inputs or outputs of the function machine.

Circle the odd one out.

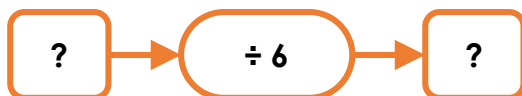
42

4.1

9

24.6

7



Explain your reasoning.



6b. Four of the cards are inputs or outputs of the function machine.

Circle the odd one out.

20.8

8

36

5.2

9



Explain your reasoning.



Find a Rule – One Step

7a. Mika has half as much on his credit card as Yasmin has in her bank account. If Yasmin has £ x in her account, which of these are true?

A) Mika has $x - 2$ pounds

B) If Mika has £17.54, Yasmin has £35.08

C) Mika has $\frac{x}{2}$ pounds



Find a Rule – One Step

7b. Davina has a quarter of the amount of orange juice that Jaxon has. If Jaxon has b ml of juice, which of these are true?

A) Davina has $\frac{b}{4}$ ml of juice

B) If Davina has 120ml, Jaxon has 440ml

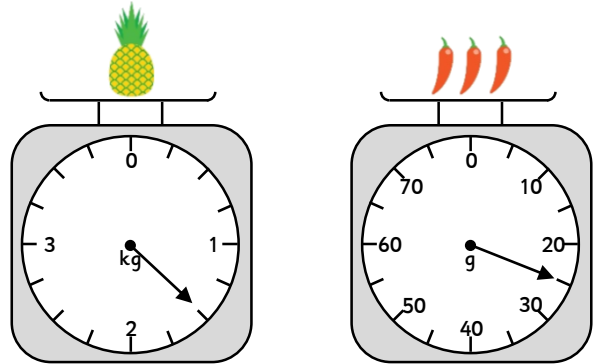
C) Davina has $0.25b$ ml of juice



8a. Write an algebraic expression to show how much toothpaste there is if cleaning spray equals z .



8b. Write an algebraic expression to show the mass of the pineapple if the mass of the chillies equals y .



9a. Four of the cards are inputs or outputs of the function machine.

Circle the odd one out.

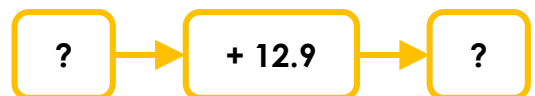


Explain your reasoning.



9b. Four of the cards are inputs or outputs of the function machine.

Circle the odd one out.



Explain your reasoning.

