

Math Quiz Thursday

- Sequences (rank and term)
- table of values
- finding missing rank or term
- finding the rule from the table or a word problem
- dependent and independent variables
(y) (x)
- solving for unknown

Sequence: a pattern of numbers.

ex: 5, 7, 9, 11, 13...

You can predict the next number.

terms: numbers in your sequence.

rank: their position

TABLE OF VALUES:

0	(x) r	1	2	3	4	5	320
3	(y) t	5	7	9	11	13	?

FIND THE RULE

① Check what it's going up by

→ This is what you're going to multiply x by.

② Find what you're adding

→ Figure out what y is when x is 0.

adding 3

$$y = 2x + 3$$

FINDING RULE FROM WORDS

Tim gets an allowance
of 10 dollars every
week as well as
3 dollars per chore
he does

money is dependent
on chores

$$y = 3x + 10$$

$$y = 3x + 10$$

$$y = 3(12) + 10$$

$$y = 36 + 10$$

$$y = 46$$

$$\begin{array}{r} 22 = 3x + 10 \\ -10 \qquad \qquad -10 \end{array}$$

$$\begin{array}{r} 12 = 3x \\ \hline 3 \qquad \qquad \hline 4 = x \end{array}$$

$$4 = x$$

$$r = 25, \quad t = 100$$

$$t = r + 12 \quad t = 25 + 12 \quad \begin{array}{l} \swarrow \\ 100 = r + 12 \\ -12 \quad -12 \\ \hline 88 = r \end{array}$$

$$t = 10r$$

$$t = 10(25)$$

$$t = 250$$

$$\frac{100}{10} = \frac{10r}{10}$$

Balancing Equations

An equation is like a scale. If you add something to one side you need to add to the other side.

The goal is to isolate our variable (your x or y)

→ order of operations

OPPOSITE

adding vs subtracting

multiplying vs dividing

exponents vs square root

Examples: solving for variables

$$a) \frac{2x=4}{2 \quad 2}$$

$$x=2$$

$$b) \frac{2y=36}{2 \quad 2}$$

$$y=18$$

$$\begin{array}{r} c) \quad \cancel{20}q = 400 \\ \hline \quad \quad \quad 20 \end{array}$$
$$q = 20$$

$$\begin{array}{r} d) \quad y \cancel{+1} = 10 \\ \quad \quad \quad -x \quad -1 \end{array}$$
$$y = 9$$

$$e) \quad 2x + 1 = 7$$

~~-1~~ ~~-1~~

$$\frac{2x}{2} = \frac{6}{2}$$

$$x = 3$$

$$f) \quad 5x + 3 = 18$$

~~-3~~ ~~-3~~

$$\frac{5x}{5} = \frac{15}{5}$$

$$x = 3$$

$$5(3) + 3 =$$

$$15 + 3 = 18 \quad \checkmark$$

