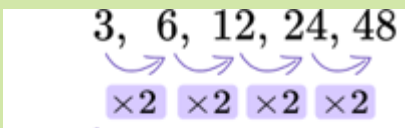
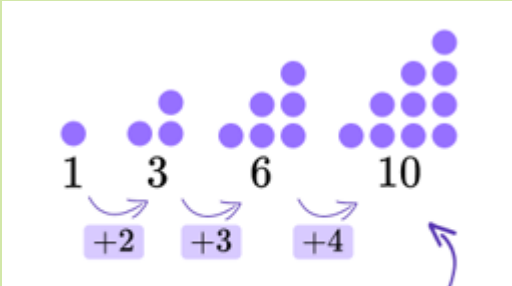


This is an **arithmetic** sequence - to get from one term to the next, you add

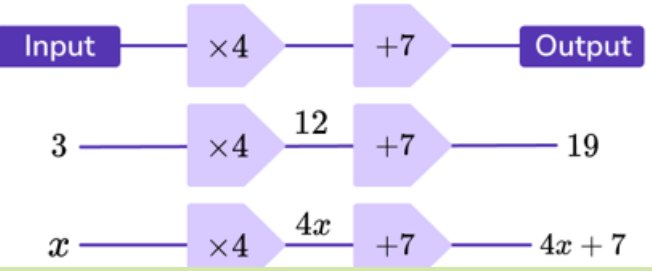


This is a **geometric** sequence - to get from one term to the next, you multiply by

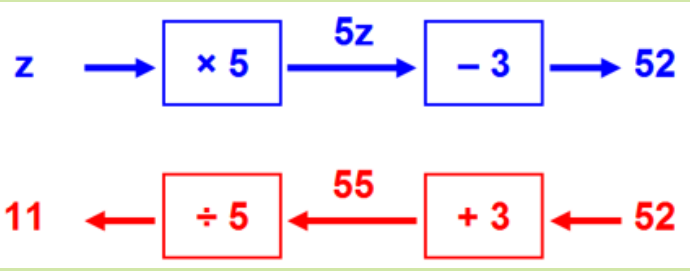


This is a special sequence called the **triangular numbers**.

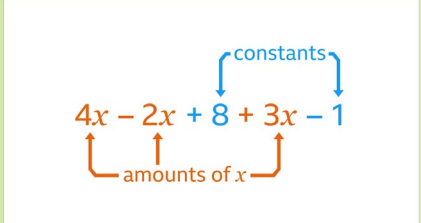
Function machines apply operations to an input. The final value is the output.



An inverse function is one where the original function has been reversed.



Simplifying using like terms means collecting terms of the same type.



“Solving” a linear equation means to work out the value of the unknown (letter). Carry out operations on both sides of the equation to isolate the unknown. Check the answer:  
 $5 \times 1 + 6 = 2 \times 1 + 9$

$$5x + 6 = 2x + 9$$

$$\begin{array}{r} -2x \\ \hline 3x + 6 = 9 \end{array}$$

$$\begin{array}{r} -6 \\ \hline 3x = 3 \end{array}$$

$$\begin{array}{r} \div 3 \\ \hline x = 1 \end{array}$$

- Mathematical Language:**
- Sequence, term, rule
  - Term-to-term, position-to-term (Linear/non-linear/arithmetic/geometric) sequences
  - (Constant/second) difference
  - Ascending, descending
  - Fibonacci sequence
  - Function, input, output, operation, inverse
  - Variable, coefficient
  - Bar model
  - (Like) term, expression
  - $3a$  for  $a \times 3$ ,  $\frac{a}{3}$  for  $a \div 3$ ,  $a^2$  for  $a \times a$ ,  $ab$  for  $a \times b$
  - Evaluate, substitute
  - Equation, solve, solution
  - Unknown
  - Commutative
  - Index

