

Monday

$$1) a+b+c=$$

$$7) 4b-3a+c=$$

$$2) c-a=$$

$$8) a+b+c+d=$$

$$3) 2a=$$

$$9) d+b^2=$$

$$4) 3d=$$

$$10) 3c+3^2=$$

$$5) 2c+d=$$

$$11) d^2-c^2 =$$

$$6) 3a + 2b=$$

$$12) a^3-a^2=$$

Extension

$$a) \blacktriangledown \div 3 = 12 \div 2$$

$$d) 24 - \blacklozenge = 16 + \blacklozenge$$

$$b) \bullet^2 \times \bullet = 27$$

$$e) 3(\star + \star + \star) = 18$$

$$c) 4 \times \blacklozenge^2 = 16$$

$$f) 5\spadesuit = 3\spadesuit + 10$$

Wednesday

Find at least 2 pairs for each

1) $a + b = 10$

2) $c + d = 12$

3) $e + f = 28$

4) $g + h = 13$

5) $c \times a = 24$

6) $2a = b$

7) $e + t = 49$

8) $f \times s = 20$

9) $y = m^2$

10) $b \div c = 5$

Extension

$pk = 60$ and $k - p = 11$

$m \times 2n = 36$ and $n + m = 2$

$3f + h = 9$ and $f + 2h = 35$

Thursday

Find the 10th, 20th and 100th term for each of these sequences

	<u>Nth term formula</u>	
1) 3, 6, 9, 12, 15,	(3n)	_____
2) 2, 6, 10, 14, 18	(4n - 2)	
3) 3, 9, 15, 21, 27,	(6n - 3)	
4) 25, 35, 45, 55, 65,	(10n + 15)	
5) 3, 8, 13, 18, 23,	(5n - 2)	
6) 17, 25, 33, 41, 49,	(8n + 9)	
7) 3, 15, 27, 39, 51,	(12n - 9)	
8) 16, 36, 56, 76, 96,	(20n - 4)	

Find the formula for the nth term for each sequence

- | | |
|----------------------------|---------------------------------|
| 1) 0, 3, 6, 9, 12, ... | nth term = <input type="text"/> |
| 2) 8, 10, 12, 14, 16, ... | nth term = <input type="text"/> |
| 3) 11, 14, 17, 20, 23, ... | nth term = <input type="text"/> |
| 4) -2, 0, 2, 4, 6, ... | nth term = <input type="text"/> |
| 5) 7, 8, 9, 10, 11, ... | nth term = <input type="text"/> |

Friday

Bronze

I can calculate the output of a function machine

1) $5 \Rightarrow \boxed{\times 4} \Rightarrow \boxed{+ 2} \Rightarrow$

2) $4 \Rightarrow \boxed{\times 2} \Rightarrow \boxed{- 6} \Rightarrow$

3) $7 \Rightarrow \boxed{\times 10} \Rightarrow \boxed{+ 4} \Rightarrow$

4) $9 \Rightarrow \boxed{+ 3} \Rightarrow \boxed{\times 5} \Rightarrow$

5) $8 \Rightarrow \boxed{- 6} \Rightarrow \boxed{\times 7} \Rightarrow$

6) $12 \Rightarrow \boxed{+ 2} \Rightarrow \boxed{+ 9} \Rightarrow$

7) $35 \Rightarrow \boxed{\div 5} \Rightarrow \boxed{- 4} \Rightarrow$

8) $8 \Rightarrow \boxed{\times 5} \Rightarrow \boxed{+ 4} \Rightarrow$

Silver

I can calculate the input of a function machine using inverse operations

1) $\Rightarrow \boxed{\times 3} \Rightarrow \boxed{+ 1} \Rightarrow 13$

2) $\Rightarrow \boxed{\times 5} \Rightarrow \boxed{- 2} \Rightarrow 33$

3) $\Rightarrow \boxed{\times 8} \Rightarrow \boxed{+ 5} \Rightarrow 21$

4) $\Rightarrow \boxed{+ 4} \Rightarrow \boxed{\times 6} \Rightarrow 66$

5) $\Rightarrow \boxed{- 3} \Rightarrow \boxed{\times 4} \Rightarrow 28$

6) $\Rightarrow \boxed{\div 4} \Rightarrow \boxed{+ 8} \Rightarrow 13$

7) $\Rightarrow \boxed{\div 2} \Rightarrow \boxed{- 11} \Rightarrow 13$

8) $\Rightarrow \boxed{\times 10} \Rightarrow \boxed{\div 9} \Rightarrow 90$