

- 1 Jared ate 30 apricots. The first day he ate 2.  
Each day after that he ate 2 more than the day before.  
How many days did it take? \_\_\_\_\_



Day								
Number of apricots								

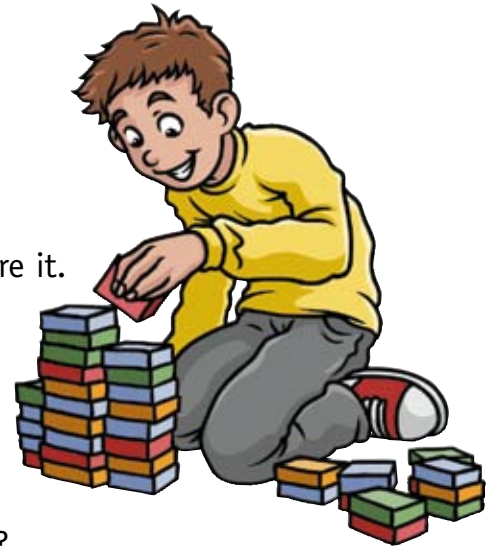
2



- Anita has to cover 60 books. The first day she covered 24.  
Each day after that she covered 6 less than the day before.  
How many days did it take? \_\_\_\_\_

Day							
Number of books							

- 3 Darak is building towers. The first tower has 5 blocks.  
Every tower after that uses 5 more blocks than the tower before it.



Tower							
Number of blocks							

- a How many blocks did the 6th tower use? \_\_\_\_\_  
b How many blocks are used altogether to build the 6 towers? \_\_\_\_\_

4



- Class 5M collected money for the local children's charity.  
The first week they collected \$70. Every week after that they collected \$9 less than the week before.

Week								
Amount								

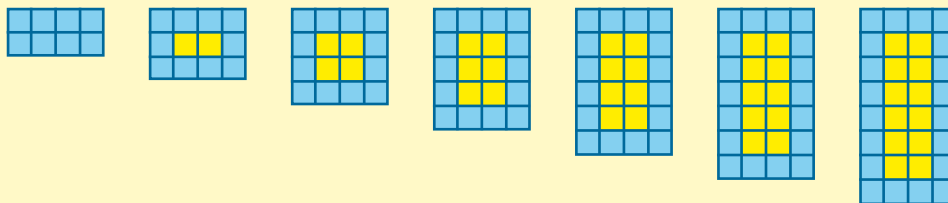
- a How much did they collect in the 7th week? \_\_\_\_\_  
b They stopped after week 8.  
How much had they collected altogether? \_\_\_\_\_



# Tables and patterns



A pattern is made using blue and yellow tiles. Here are some patterns of different sizes. All patterns are 4 tiles wide.



1 In a pattern that is 5 squares long:

- a how many blue tiles are needed? \_\_\_\_\_ b how many yellow tiles are needed? \_\_\_\_\_  
 c how many tiles are needed altogether? \_\_\_\_\_

2 Complete the table.

Length of pattern in tiles	2	3	4	5	6	7	8	9	10
Number of blue tiles needed									
Number of yellow tiles needed									

3 In a pattern that is 15 tiles long how many:

- a blue tiles are needed? \_\_\_\_\_ b yellow tiles are needed? \_\_\_\_\_

4 How many tiles long is the pattern if there are:

- a 40 blue tiles? \_\_\_\_\_ b 40 yellow tiles? \_\_\_\_\_

5 Shen found a caterpillar. He measured it every day.

Day	1	2	3	4						
Length (mm)	26	27.5	29	30.5						

a How much did it grow each day? \_\_\_\_\_

b Complete the table.

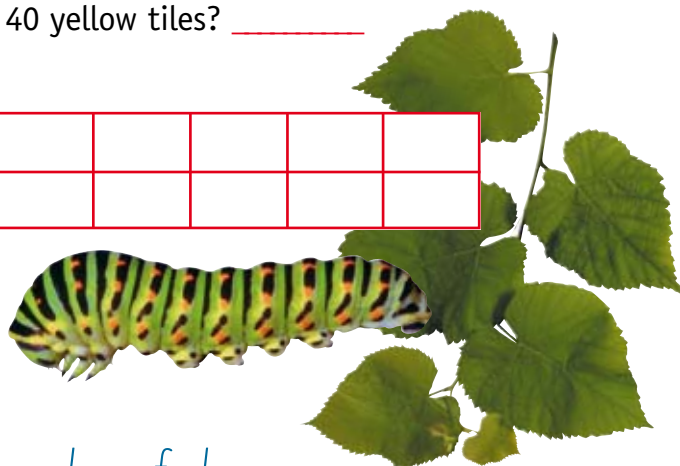
c When was it 40 cm long? \_\_\_\_\_

d Shen wrote a rule. Length = 24.5 + 1.5 x number of days.

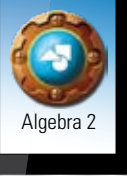
Does the rule work? \_\_\_\_\_ How do you know? \_\_\_\_\_

e What was the caterpillar's length the day before Shen found it? \_\_\_\_\_

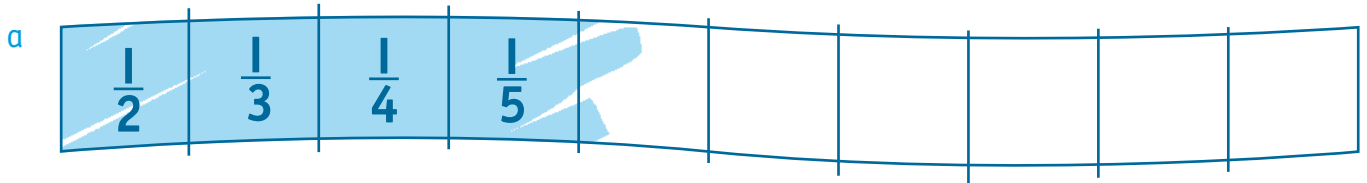
f Why did he start the rule at 24.5 mm? \_\_\_\_\_



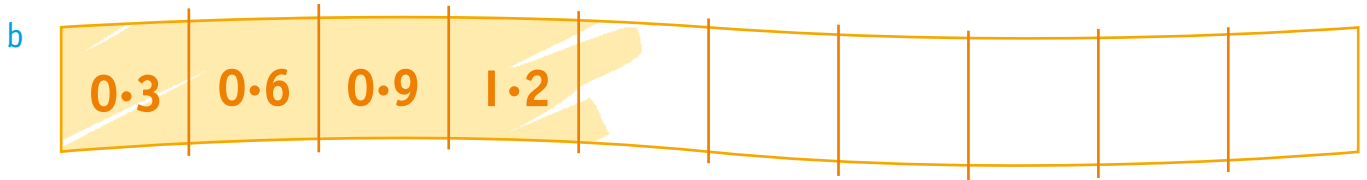
# Number patterns



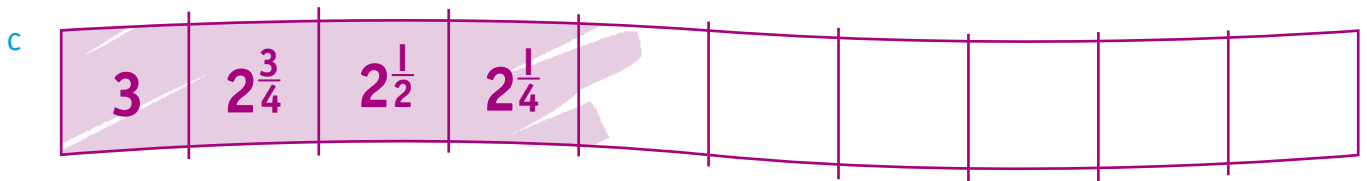
1 Complete each pattern and write the rule.



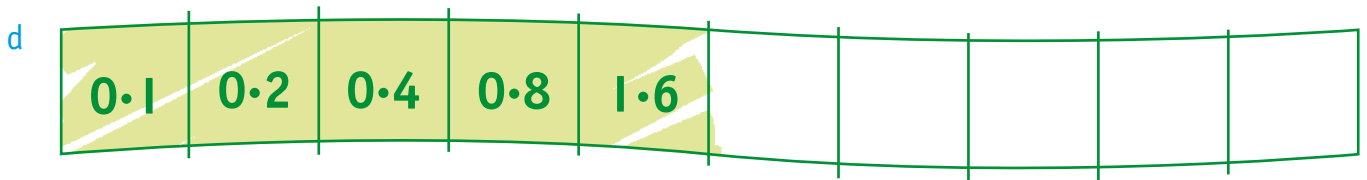
Rule \_\_\_\_\_



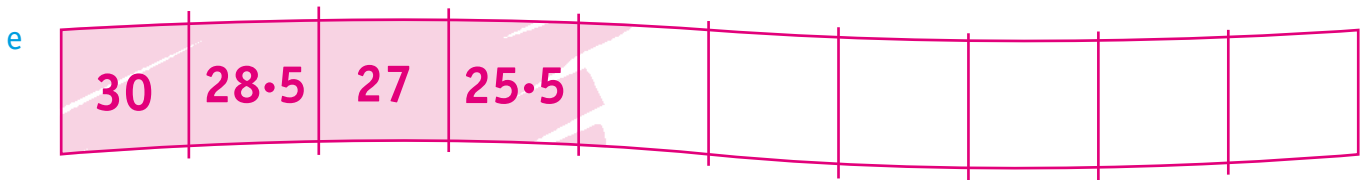
Rule \_\_\_\_\_



Rule \_\_\_\_\_

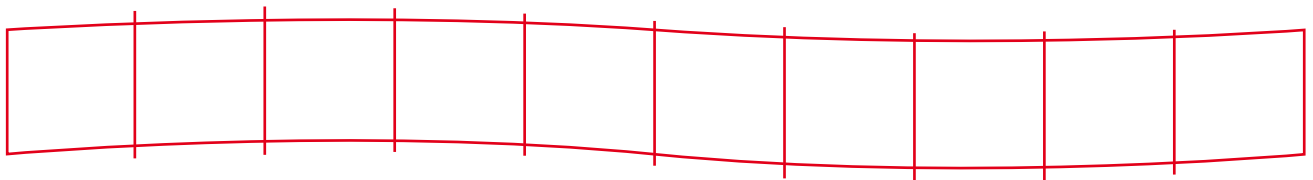


Rule \_\_\_\_\_



Rule \_\_\_\_\_

2 Write your own pattern.



Rule \_\_\_\_\_



# Following patterns



Complete each pattern and match with its rule.

- 1 a 16, 25, 34, , ,
- b 1·6, 1·9, 2·2, , ,
- c  $6\frac{1}{3}$ ,  $5\frac{2}{3}$ , 5,  $4\frac{1}{3}$ , ,
- d 0·15, 0·25, 0·35, , ,
- e 0·729, 0·731, 0·733, , ,
- f 2·4, 2·48, 2·56, , ,

- G  $-\frac{2}{3}$
- H + 9
- I + 0·002
- J + 0·3
- K + 0·08
- L + 0·1

2 Make up three patterns and write their rules.

a        →

b        →

c        →

3

**A**  $\times 3, -6$

**B**  $-5, \times 4$

**C**  $+12, \div 2$

**D**  $\div 10, +37$

**E**  $+43, \div 4$

Each lamp changes numbers by performing different operations.

What numbers come out if:

- a 5 is put in? A \_\_\_\_\_ B \_\_\_\_\_ C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_
- b 20 is put in? A \_\_\_\_\_ B \_\_\_\_\_ C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_
- c 12 is put in? A \_\_\_\_\_ B \_\_\_\_\_ C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_
- d 0 is put in? A \_\_\_\_\_ B \_\_\_\_\_ C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_
- e 43 is put in? A \_\_\_\_\_ B \_\_\_\_\_ C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_

