

Mathematics

Constant of proportionality

- downloadable resource.

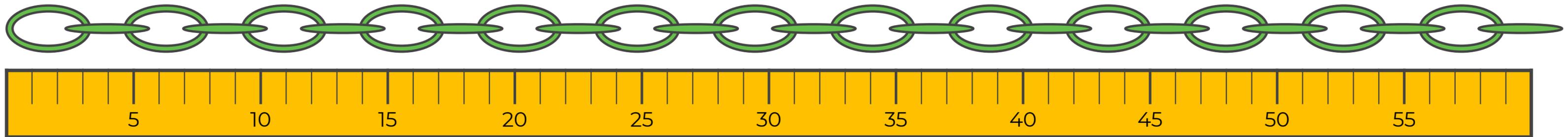
Lesson 3 of 12.

Dr Rim Saada



Try this

The cost of this chain is directly proportional to its length.



Length (cm)	0	5	10	15	20	25	30	35	40	45	50	55	60
Cost (p)	0	15	30	45		75		105			150		180

- 1 Complete the table for the cost of the multiples of 5.
- 2 Create and complete the table for the cost of the multiples of 2.



Independent task

1) Three 'Chunkie' chocolate bars cost £2.55.

Seven 'Chunkie' chocolate bars cost £5.95.

n 'Chunkie' chocolate bars cost m pence.

Fill in the gaps to represent this.

3 X 255 pence

7 X 595 pence

12 X pence

n X m pence

2) The number of mugs is directly proportional to the cost of the mugs.

Complete the table below without finding the cost of 1 mug.

Number of mugs	4			
Cost	£1.60	£2.80	£3.60	£4.00

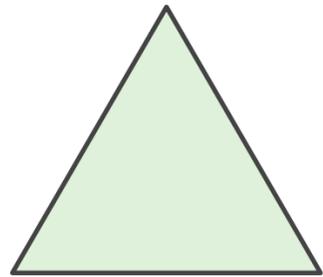
3) The number of hours Alex works is directly proportional to the pay he receives. Complete the table below without finding the pay for 1 hour.

Hours worked		17		31
Pay	£150	£212.50	£237.50	

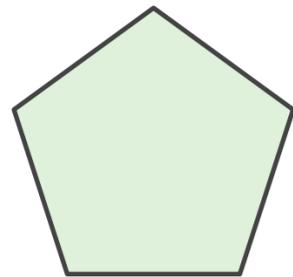


Explore

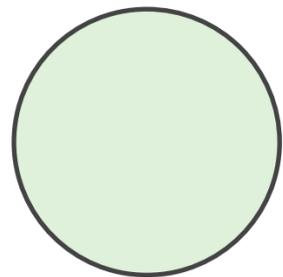
The relationship between the height of these shapes and their perimeter is directly proportional. Fill in these tables...



<i>Regular triangle</i>				
Height (m)	1	2	10	200
Perimeter (m) <small>[rounded to 2 d.p.]</small>	3.46			



<i>Regular pentagon</i>				
Height (m)	1	2	10	200
Perimeter (m) <small>[rounded to 2 d.p.]</small>	3.25			



<i>Circle</i>				
Height (m)	1	2	10	200
Perimeter (m) <small>[rounded to 2 d.p.]</small>	3.14			

Can you estimate the perimeter of a heptagon with a height of 1m? What about a nonagon?

