

Lesson 1 Answers

Multiplied by 10

Bronze	Silver	Gold
20	570	840
150	680	32
260	740	44
380	1820	56
460	2930	4
500	4980	721

Multiplied by 100

Bronze	Silver	Gold
200	5700	8400
1500	6800	320
2600	7400	440
3800	18,200	560
4600	29,300	40
5000	49,800	7210

Challenge

Annie has multiplied a whole number by 10

Her answer is between 440 and 540

What could her original calculation be?

How many possibilities can you find?

45×10

46×10

47×10

48×10

49×10

50×10

51×10

52×10

53×10

(or the above calculations written as 10×45 etc.).

Lesson 2 Answers

Divide by 10

<u>Bronze</u>	<u>Silver</u>	<u>Gold</u>
10	570	18.4
250	68	33.2
360	74	54.4
490	18.2	65.6
560	29.3	89.4
90	49.8	72.1

Divide by 100

<u>Bronze</u>	<u>Silver</u>	<u>Gold</u>
1	57	1.84
25	6.8	3.32
36	7.4	5.44
49	1.82	6.56
56	2.93	8.94
9	4.98	7.21

Challenge

While in Wonderland, Alice drank a potion and everything shrank. All the items around her became ten times smaller!
Are these measurements correct?

Item	Original measurement	After shrinking
Height of a door	220 cm	2,200 cm
Her height	160 cm	16 cm
Length of a book	340 mm	43 mm
Height of a mug	220 mm	?

Can you fill in the missing measurement?

Can you explain what Alice did wrong?

Height of a door
Incorrect - Alice has multiplied by 10.

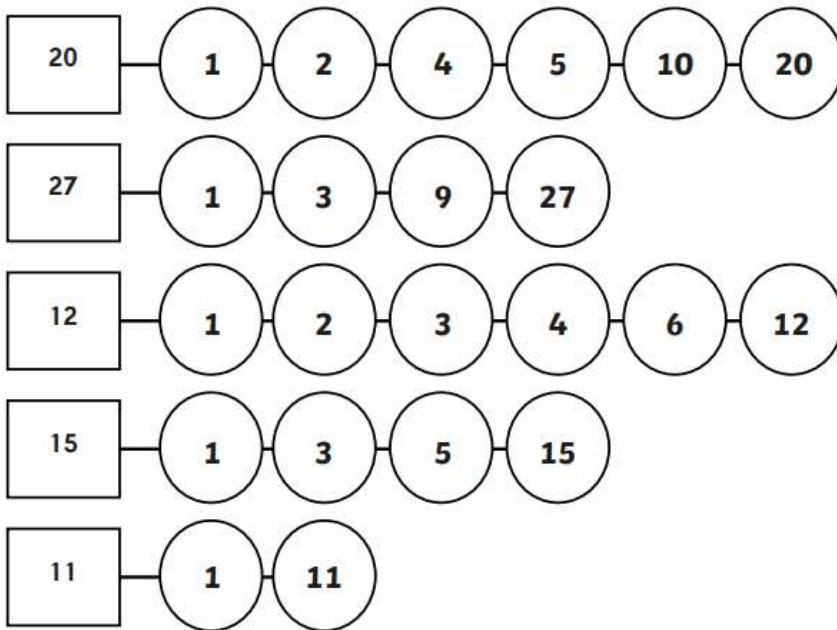
Her height
Correct

Length of a book
Incorrect - Alice has swapped the order of the digits. When dividing by 10 the order of the digits never changes.

Height of a mug
22 mm.

Lesson 3 Answers

Task 1



Task 2

List the factors of these numbers:

6. 7 **1, 7**

7. 11 **1, 11**

8. 23 **1, 23**

9. 13 **1, 13**

10. 5 **1, 5**

What do you notice about these numbers?

They only have 1 and the number itself as factors

These numbers are called prime numbers.

Challenge

Tommy says



The greater the number, the more factors it will have.

Is Tommy correct?

Use arrays to explain your answer.

Tommy is incorrect. Children explain by showing an example of two numbers where the greater number has less factors.

For example, 15 has 4 factors 1, 3, 5 and 15
17 has 2 factors 1 and 17