

Monday

1) Draw a rectilinear shape that has a perimeter of 32cm. The shape must only be made up of two rectangles. Find 3 possible solutions.

Find a fourth possibility that uses three or more rectangles.

2) Look at the shape below. It has been created using four rectangles, each with a width of 4cm. The length of each rectangle is 6 times the width. What is the perimeter of the square inside?





b) Multiple answers are possible. Here are two possible solutions (not to scale).



The width of each rectangle is 4cm.

To find the length of one rectangle, we multiply 4cm by 6: 4cm \times 6 = 24cm

To find the length of one of the sides of the square inside, we subtract the width of one rectangle from the length of one rectangle: 24cm – 4cm = 20cm

20cm x 4 = 80cm

The square inside the shape has a perimeter of 80cm.



Tuesday

1) Mrs Smith multiplied a two-digit number by 10. My answer was a multiple of 7. My <u>original</u> number had fewer than 6 tens. Shade Mrs Smith's possible calculations on this grid.

7 × 10	21 × 10	35 × 10	32 × 10
65 × 10	14 × 10	63 × 10	84 × 10
28 × 10	40 × 10	49 × 10	36 × 10
77 × 10	42 × 10	70 × 10	24 × 10

2) One of Mrs Smith's possible calculations is missing from this grid. Can you find the missing calculation?

3) Mrs Smith then multiplied a three-digit whole number by 10. My threedigit number was an odd number. It had a hundred digit that was a multiple of 3 and a ten digit that was either a 0 or 5. What could the original calculation have been? Can you find all of the possible answers? One example has been done for you.

301 × 10 = 3010

Answers below

1.

2			
7 × 10	21 × 10	35 × 10	32 × 10
65 × 10	14 × 10	63 × 10	84 × 10
28 × 10	40 × 10	49 × 10	36 × 10
77 × 10	42 × 10	70 × 10	24 × 10

2.56 × 10 = 560

3.

The hundreds digit could be a 3, 6 or 9. The tens digit could be a 0 or 5. The ones digit could be a 1, 3, 5, 7 or 9. In total, there are 30 possible calculations and answers.

301 × 10 = 3010	351 × 10 = 3510	601 × 10 = 6010	651 × 10 = 6510	901 × 10 = 9010	951 × 10 = 9510
303 × 10 = 3030	353 × 10 = 3530	603 × 10 = 6030	653 × 10 = 6530	903 × 10 = 9030	953 × 10 = 9530
305 × 10 = 3050	355 × 10 = 3550	605 × 10 = 6050	655 × 10 = 6550	905 × 10 = 9050	955 × 10 = 9550
307 × 10 = 3070	357 × 10 = 3570	607 × 10 = 6070	657 × 10 = 6570	907 × 10 = 9070	957 × 10 = 9570
309 × 10 = 3090	359 × 10 = 3590	609 × 10 = 6090	659 × 10 = 6590	909 × 10 = 9090	959 × 10 = 9590



Wednesday

- Mrs Smith multiplies a whole number by 100. My answer has four digits. The sum of the digits is 15. What could Mrs Smith's original number and calculation have been? How many possible answers could there have been?
- 2) Abe multiplied a whole 2-digit number by 100. His number was an even number and a multiple of 7. What could the original calculation have been? How many possible answers could he get?
- 3) A school field has a perimeter of 46m. What is the length of the missing side? Give your answer in centimetres.



Answers below

1) 96 × 100 = 9600

87 × 100 = 8700

78 × 100 = 7800

69 × 100 = 6900

2) The ones digit could be a 0, 2, 4, 6 or 8. In total, there are 7 possible combinations and answers.

14 × 100 = 1400	70 × 100 = 7000
28 × 100 = 2800	84 × 100 = 8400
42 × 100 = 4200	98 × 100 = 9800
56 × 100 = 5600	

3) The missing side is IIm.

46 - 12 - 12 = 22

22 ÷ 2 = 11

11m = 1100cm

Thursday

1)

The Nadin family were comparing their ages. Ben's age is a whole number and is ten times smaller than Olivia's age. Dad is half of Grandad's age. Olivia's age is ten times smaller than Grandad's age. Jack's age is ten times smaller than Dad's age.

I am between 80 and 110 years old.



2)

Mia and Jacob are dividing numbers by 10.



When I divide my number by 10 and divide it by 10 again, I get a whole number greater than 10 and less than 20.

When I divide the same number by 10, I get a whole number greater than 100 and less than 200.



Grandad

What starting numbers could the children be using? How many possibilities can you find?

Answers Below

- If any age other than 100 is selected for Grandad, Olivia's age will not be a whole number of years. Grandad: 100 years old
 Olivia: 10 years old
 Dad: 50 years old
 Ben: I year old
 Jack: 5 years old
- 2) If the Mia was using the number 1100, they would get the answer 11.

If Jacob also used 1100, they would get the answer 110.

Therefore, the following starting numbers are possible: 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800 and 1900.