



MAGIC OF 37

**Complete the number sentences
by putting a number
or \times or $=$ in the box:**

$$37 \times 3 \square 111$$

$$37 \times \square = 222$$

$$37 \square 9 = 333$$

$$37 \times \square = 444$$

$$\square \times 15 = 555$$

$$37 \square 18 = 666$$

$$\square \times 21 = 777$$

$$37 \times 24 \square 888$$

$$\square \times 27 = 999$$

Work by yourself, first complete the number sentences and then explain why the pattern occurs.

Carry on these multiplications up to 37×54 and then explore the pattern that you get.

Work with a partner and talk about what you notice about this pattern. Then write down everything that you notice.

HELP

Look at the diagram and think about 37×3 .

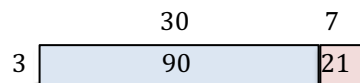
This multiplication is 30×3 add 7×3 .

So, $37 \times 3 = 90 + 21 = 111$.

If you multiply by 6 instead of 3 then you double the answer.

$$37 \times 6 = 111 \times 2 = 222.$$

Can you complete all the number sentences now?



NEXT

BEAUTIFUL NUMBERS

Can you work out the numbers to replace the marks?

$$? \times 9 + 7 = 88$$

$$? \times 9 + 6 = 888$$

$$? \times 9 + 5 = 8888$$

$$? \times 9 + 4 = 88888$$

$$? \times 9 + 3 = 888888$$

$$? \times 9 + 2 = 8888888$$

$$? \times 9 + 1 = 88888888$$

$$? \times 9 + 0 = 888888888$$

? -