Have a go at these arithmetic calculations.

1. $8^2 + 6^2 =$

2. $17 - 8.24 =$

3. $72 \times 29 =$

4. $3108 \div 74 =$

Complete as many of these as you can in 3 minutes:

1 ☐ = 34 x 45

1mark

2 3.04 x ☐ = 304

1mark

3. Write down the number that is closest to 60.

60.1 59.91

60.001 59.09

Lesson 21

Learning Question:

Can you use written division methods in cases where the answer has up to two decimal places?

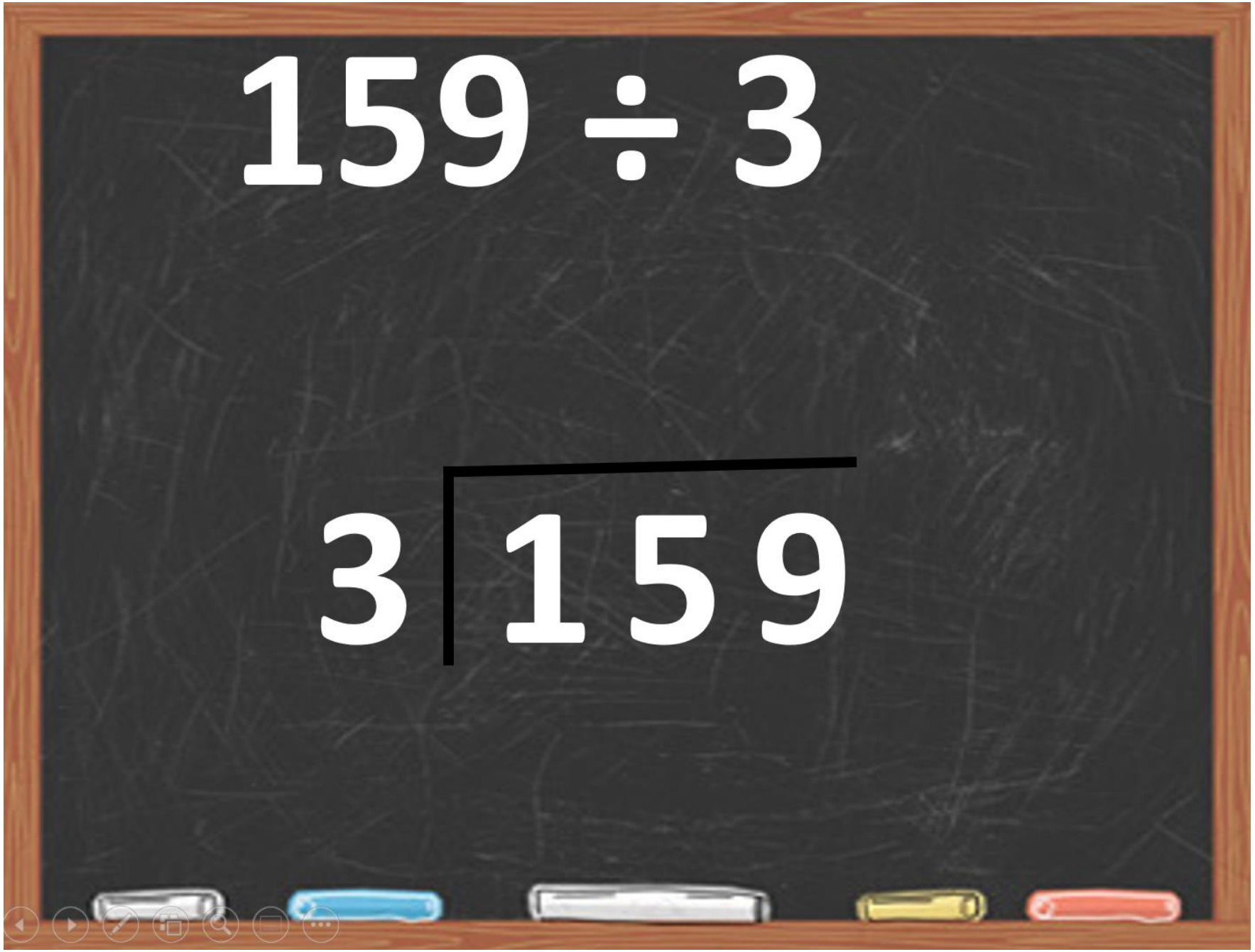
Success Criteria:

- Divide the dividend by the divisor one digit at a time, starting from the left.
- Put the result of each division directly above (on top of the 'bus stop').
- If the divisor won't go into a number exactly, carry the remainder across to the next digit on the right.
- If it won't go at all, put a zero on top and carry the whole number.
- If the dividend has a decimal point, put a decimal point above it in the answer.
- If you have a remainder but no further digits to the right to add it to, put a decimal point and add a zero after the decimal point. Then carry your remainder.

Vocabulary

Calculate
Integer
Decimal
Divisor
Divisible
Operation
Inverse
Quotient

Let’s remind ourselves of the basic written method for short division.


159 ÷ 3
3 | 159

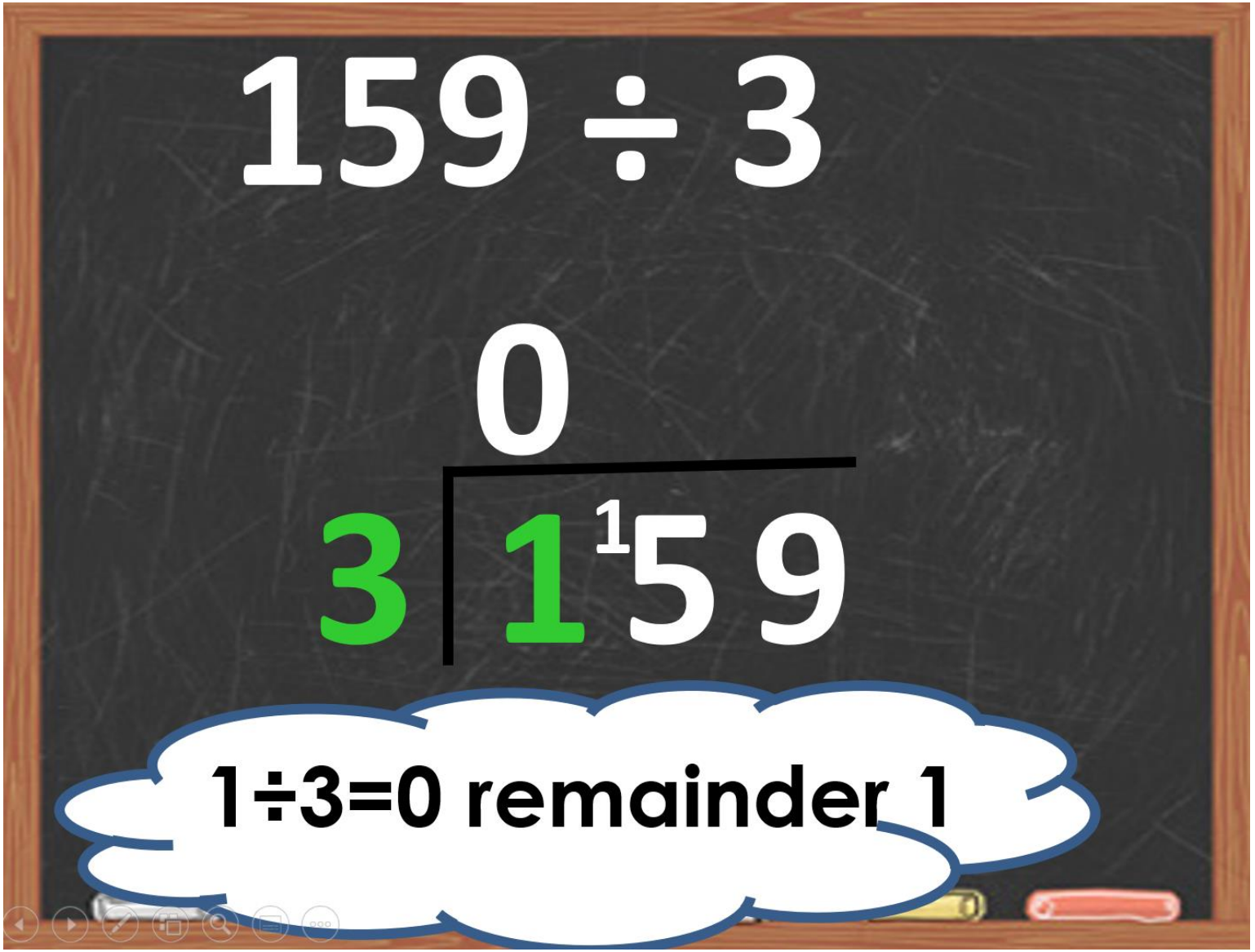
159 ÷ 3

Divisor

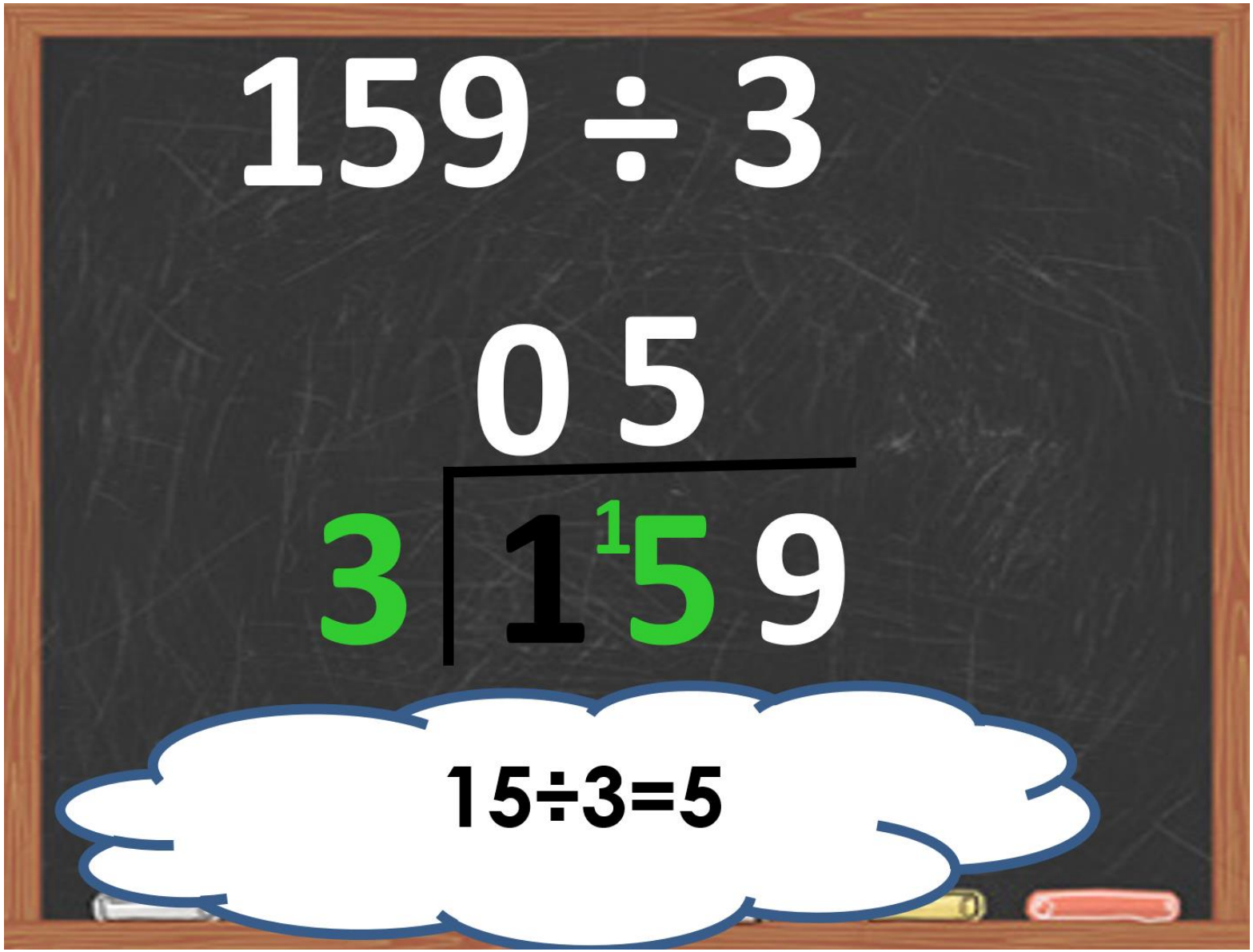
Dividend

$$3\overline{)159}$$

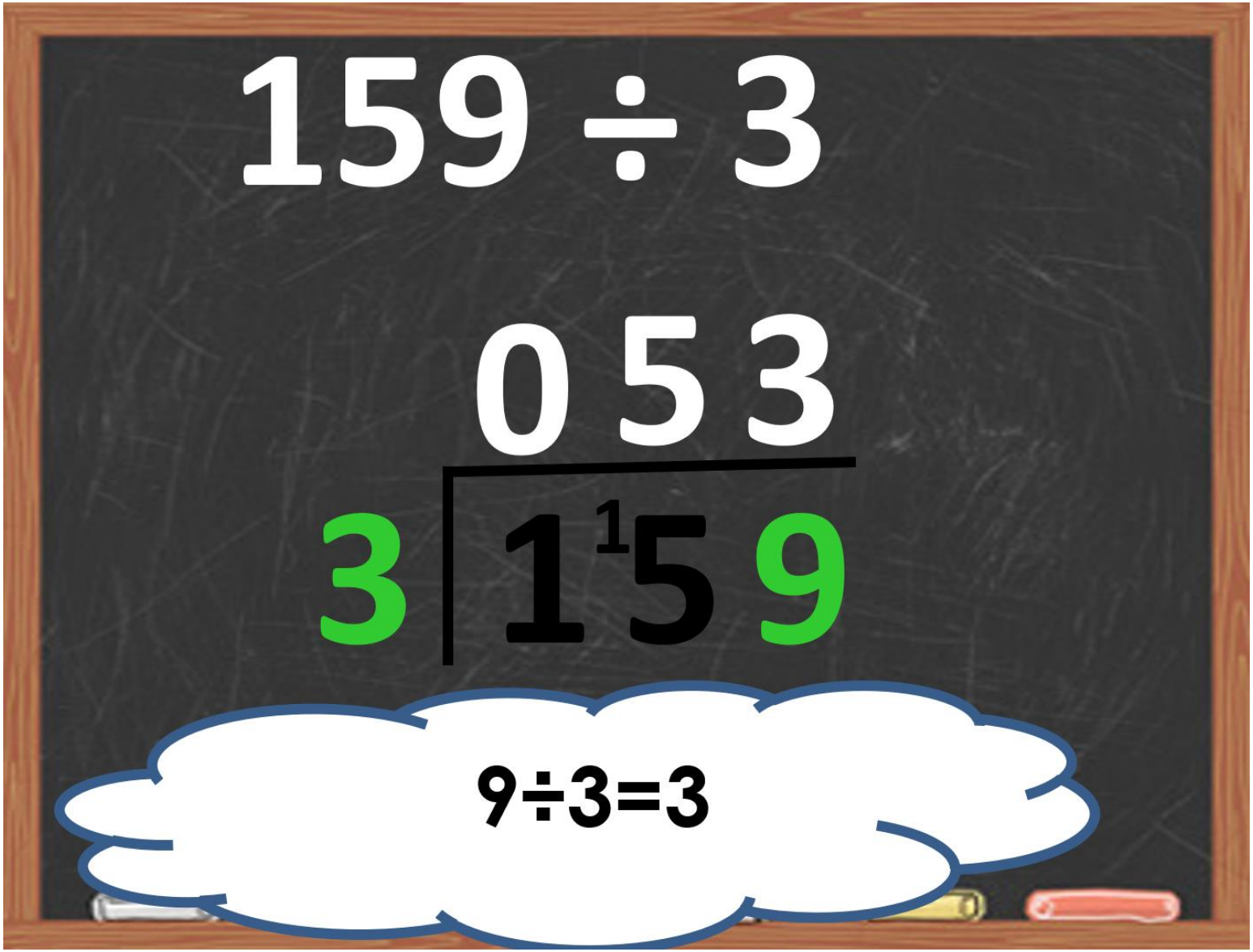
The quotient is the answer you get in a division calculation.



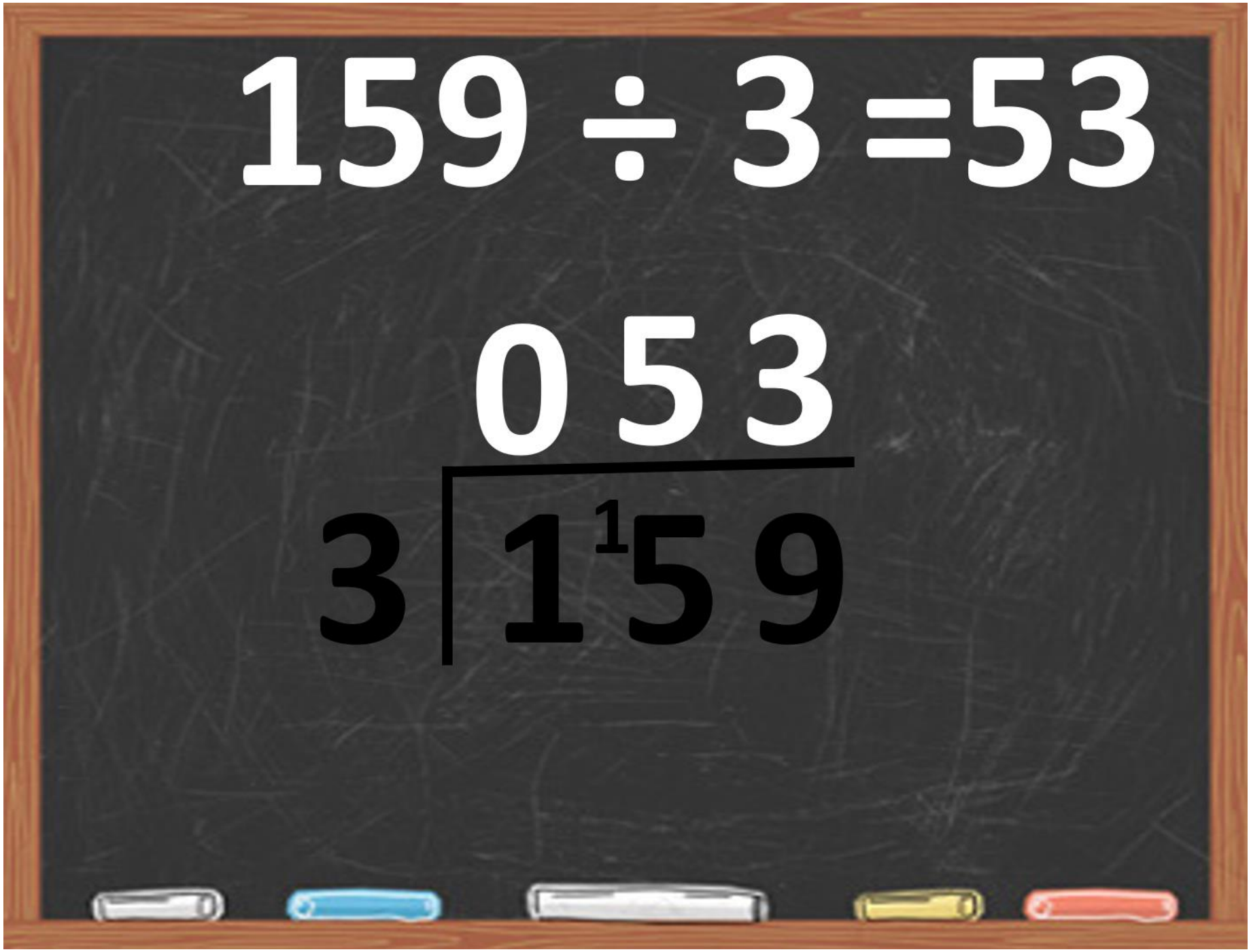
Start by asking how many times 3 (the divisor) goes into 1 = 0 with remainder of 1. Put zero above the 1 and carry the remaining 1 over to the 5 to make that 15.



How many times does 3 go into 15 = 5 with no remainders.
Put 5 above the 15.

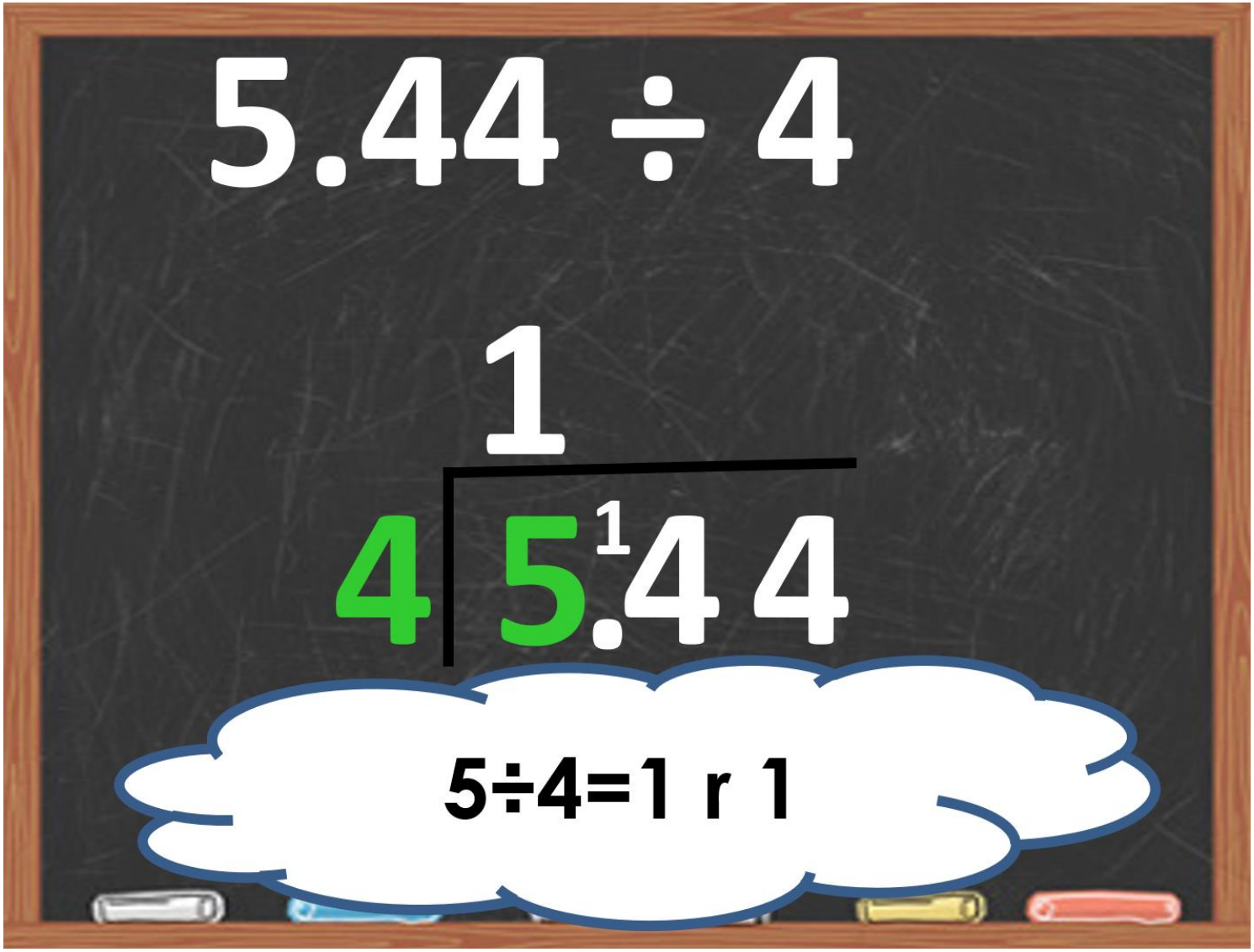


Finally, how many times does 3 go into 9 = 3 with no remainders. Put 3 above the 9.

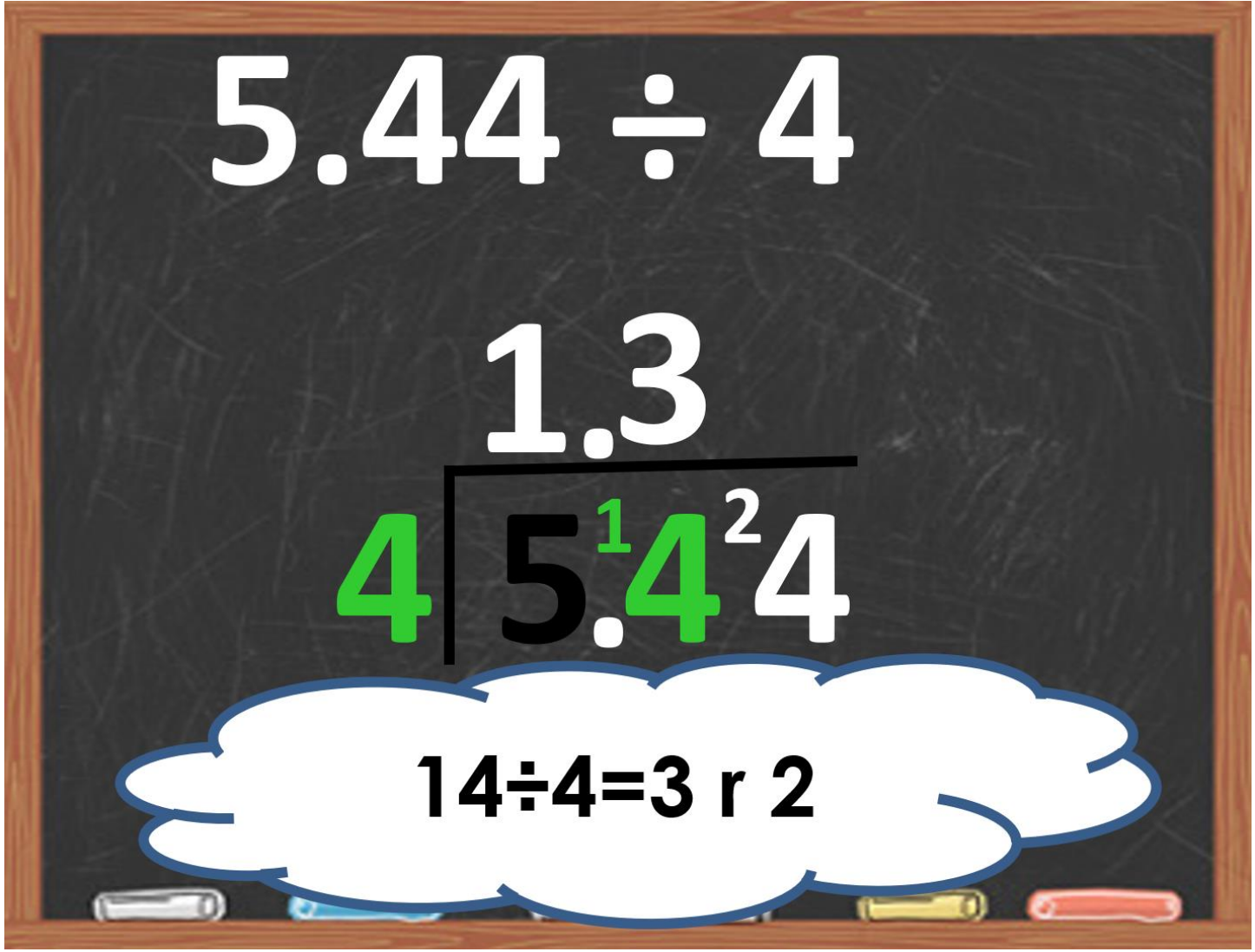

159 ÷ 3 =53
0 5 3
3 | 1 15 9

$$5.44 \div 4$$

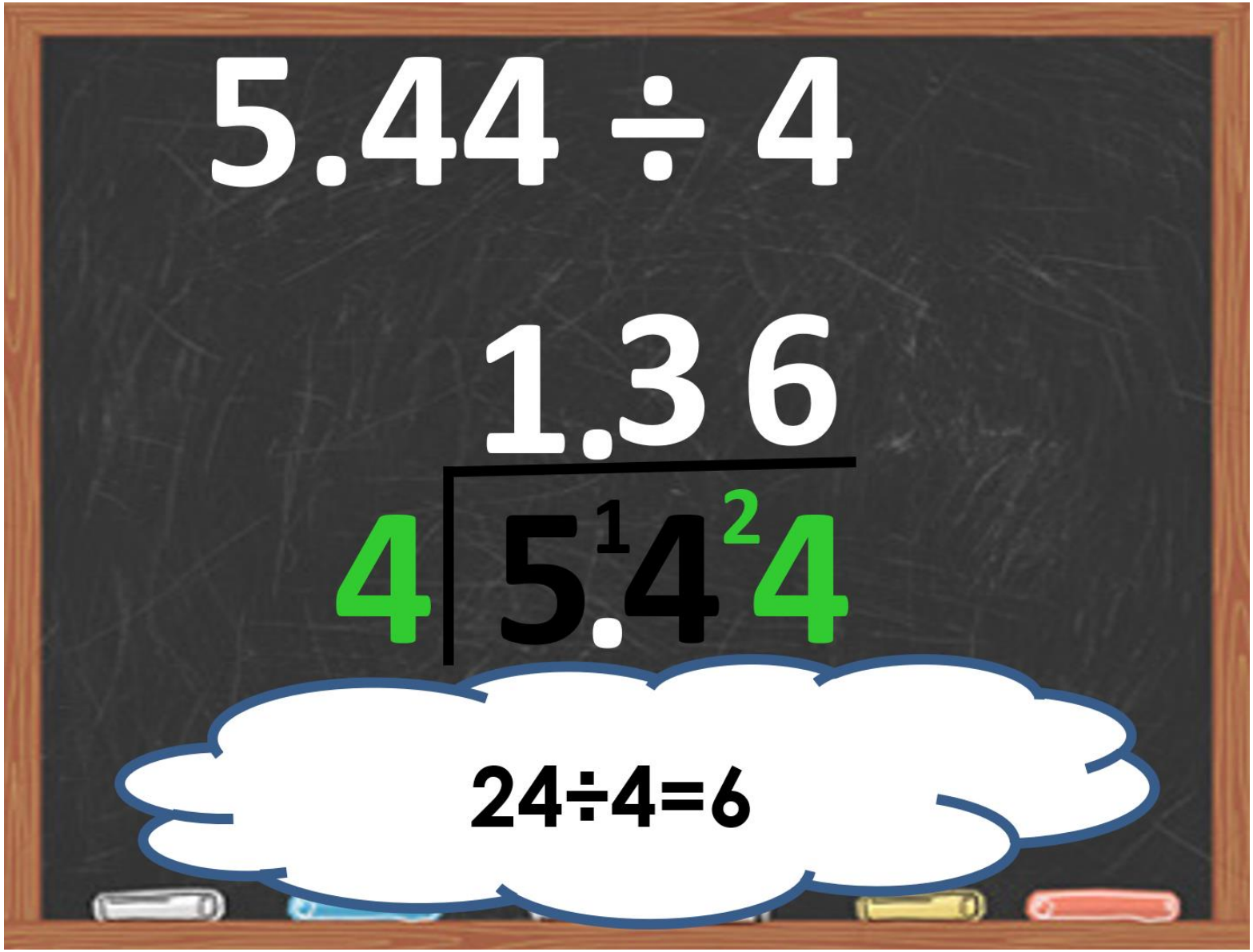
$$4\overline{)5.44}$$



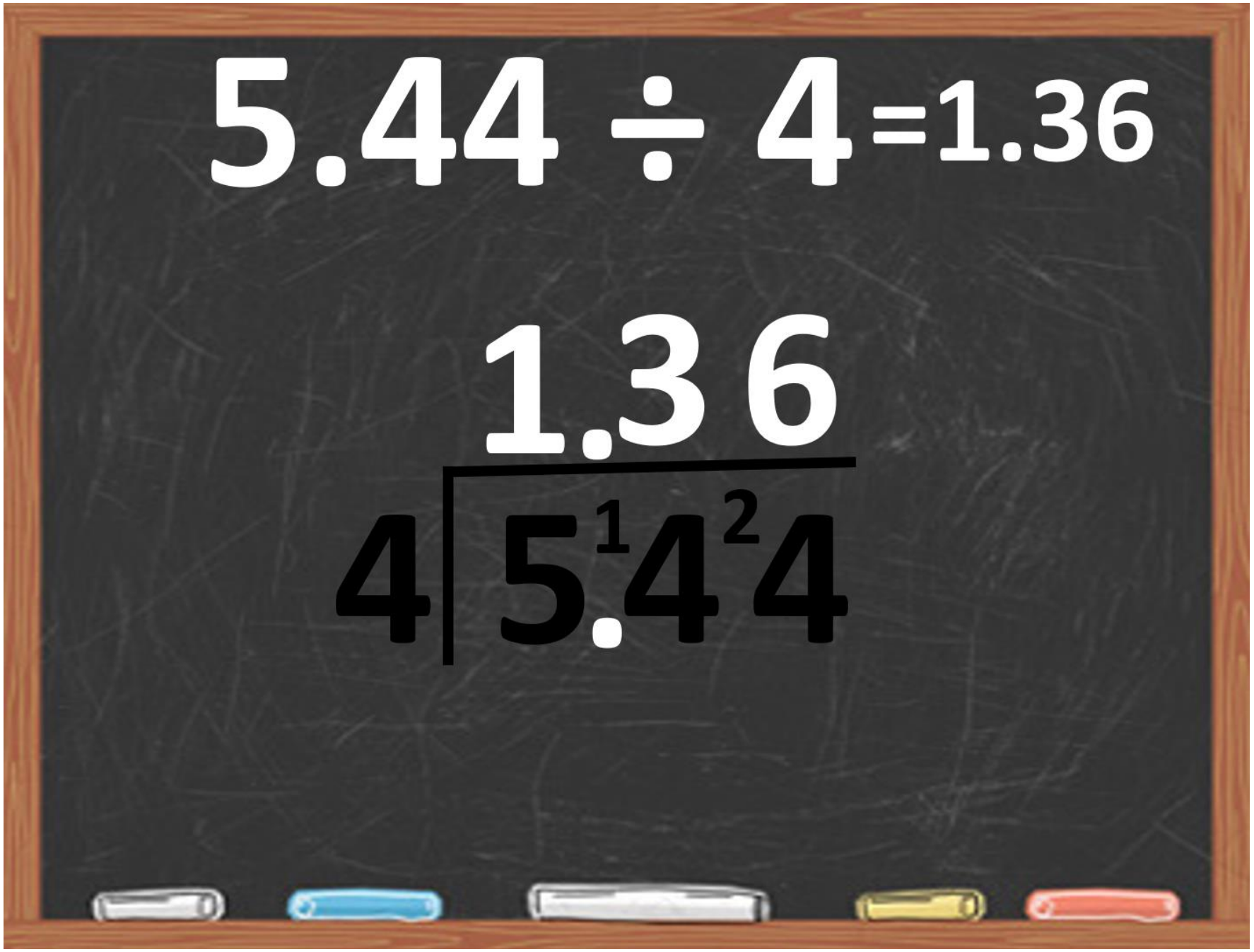
Deal with this in the same way. Start by asking how many times 4 goes into 5 = 1 with remainder of 1. Put 1 above the 5 and carry the remaining 1 over to the 4 to make that 14.

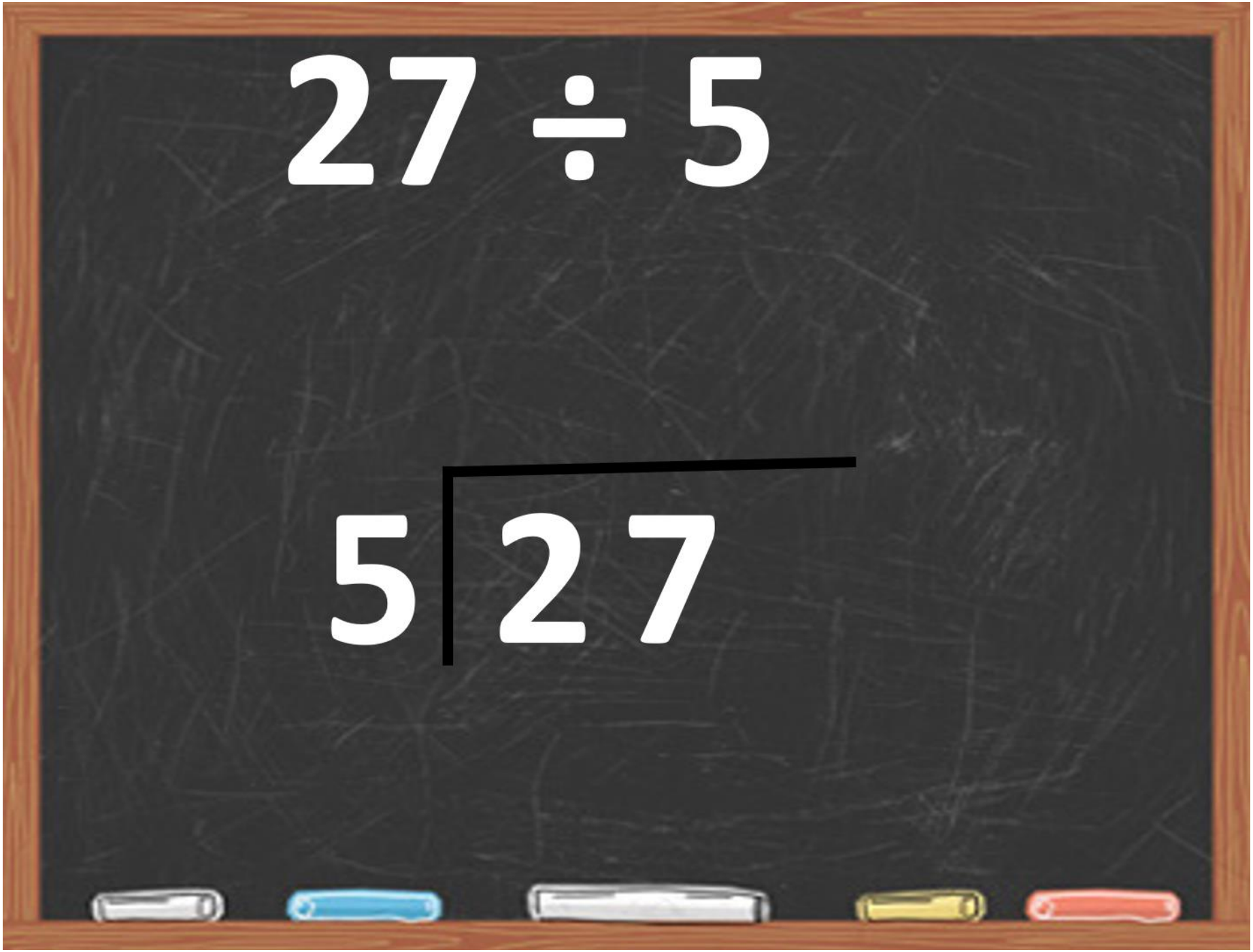


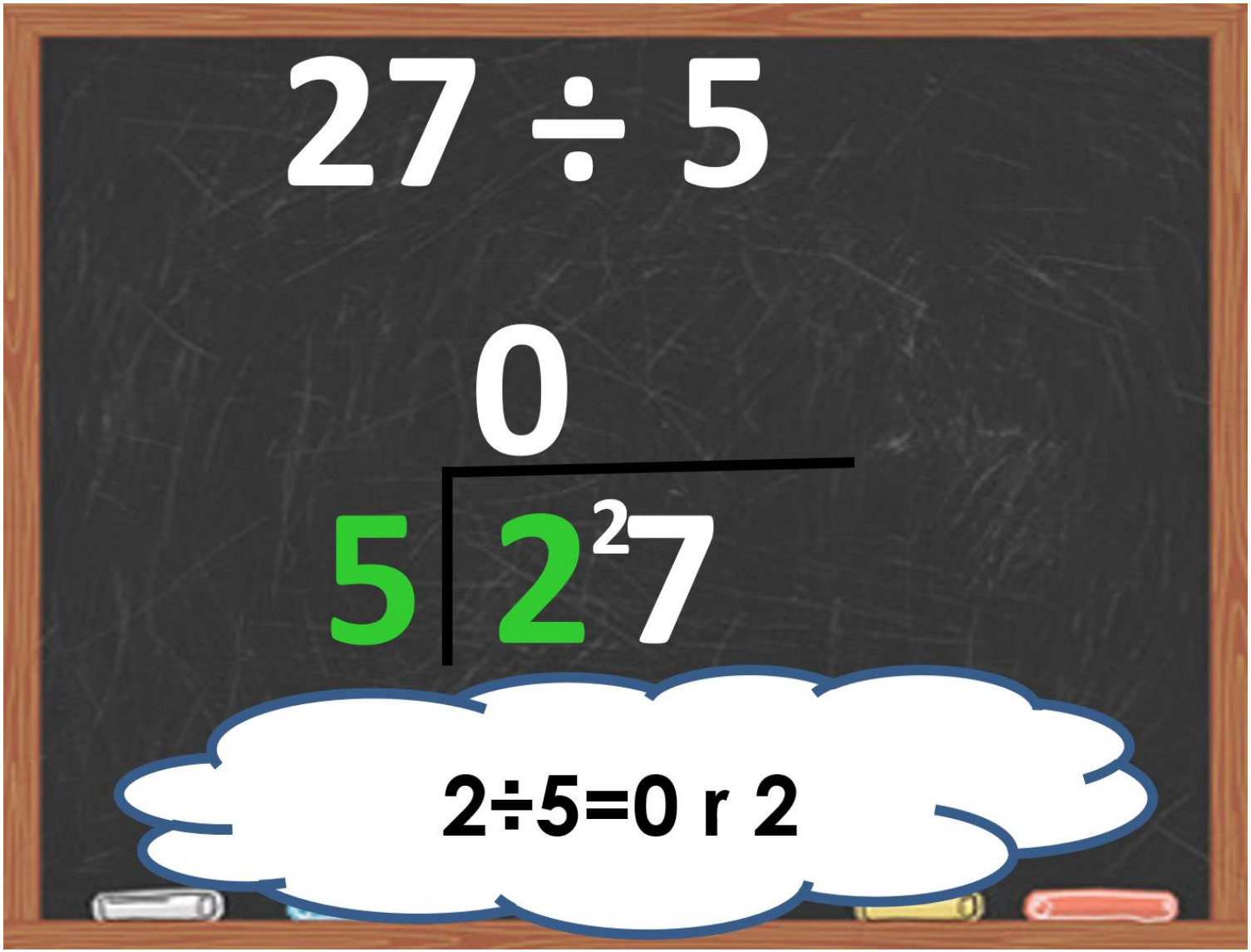
Put a decimal point above the decimal point in the dividend. Then ask how many times 4 goes into 14 = 3 with a remainder of 2. Put 3 above the 14 and carry the remaining 2 over to the next 4 to make that 24.



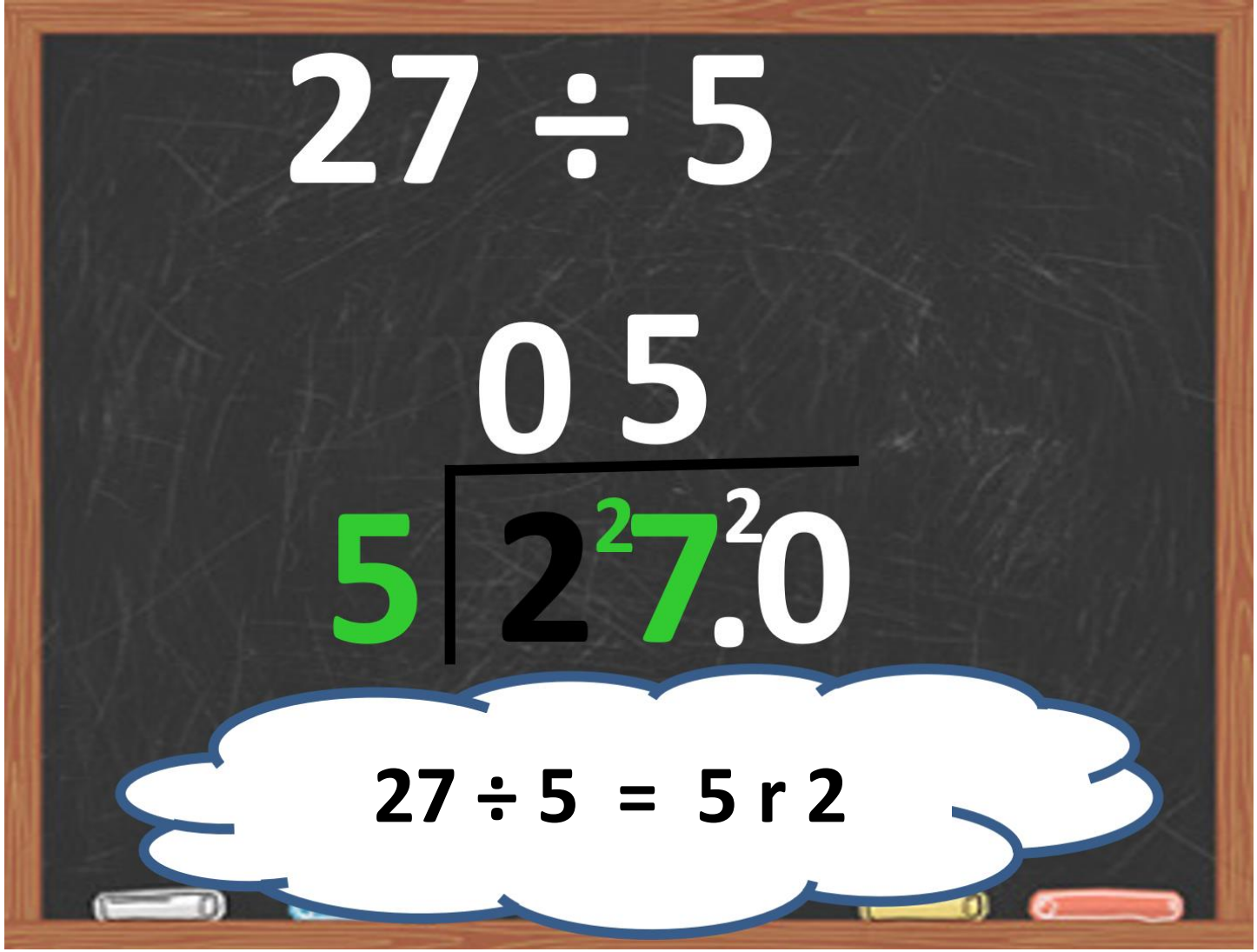
Finally, how many times does 4 go into 24 = 6 with no remainders. Put 6 above the 4.


5.44 ÷ 4 =1.36
1.3 6
4 | 5.1 4.2 4

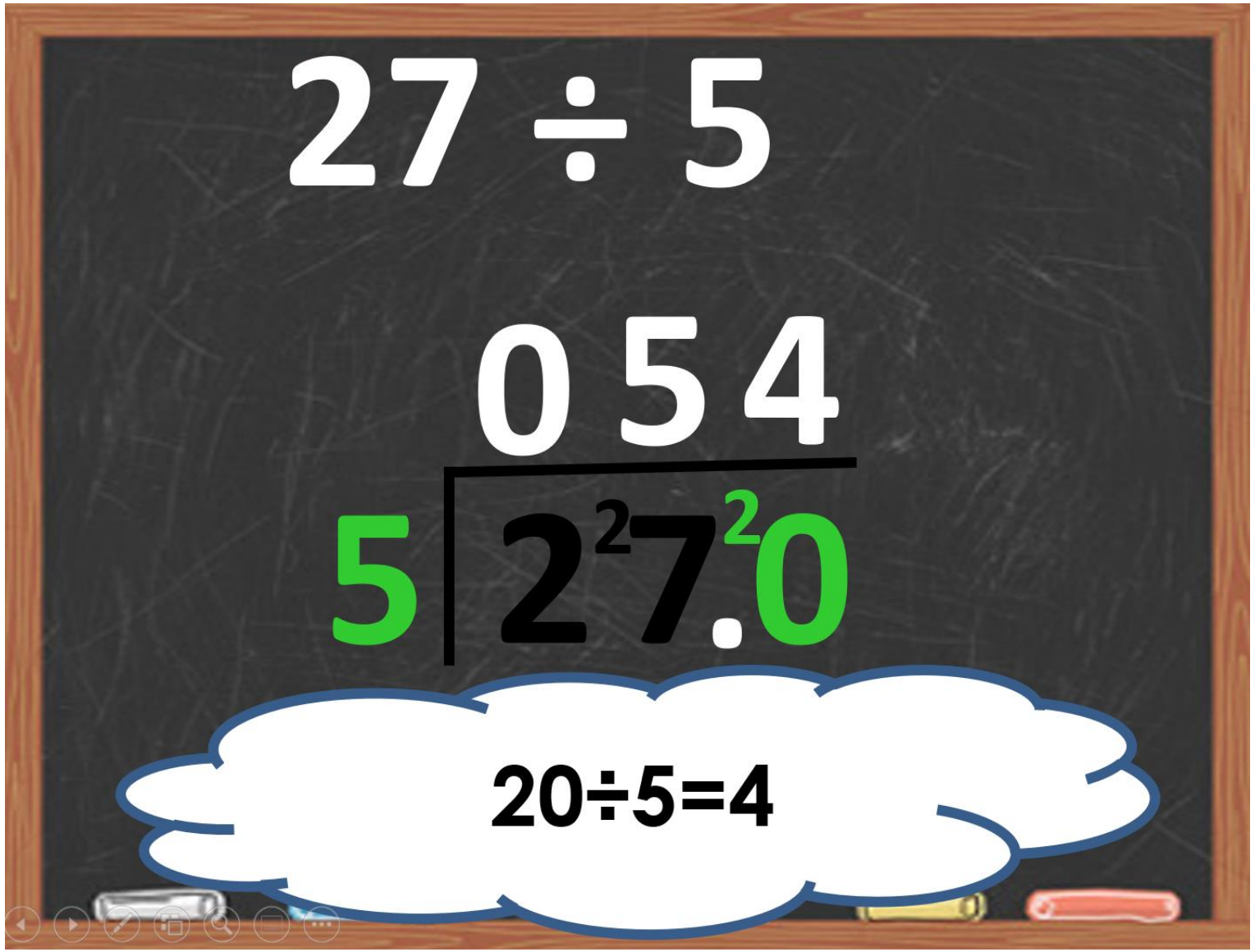

27 ÷ 5
5 | 27



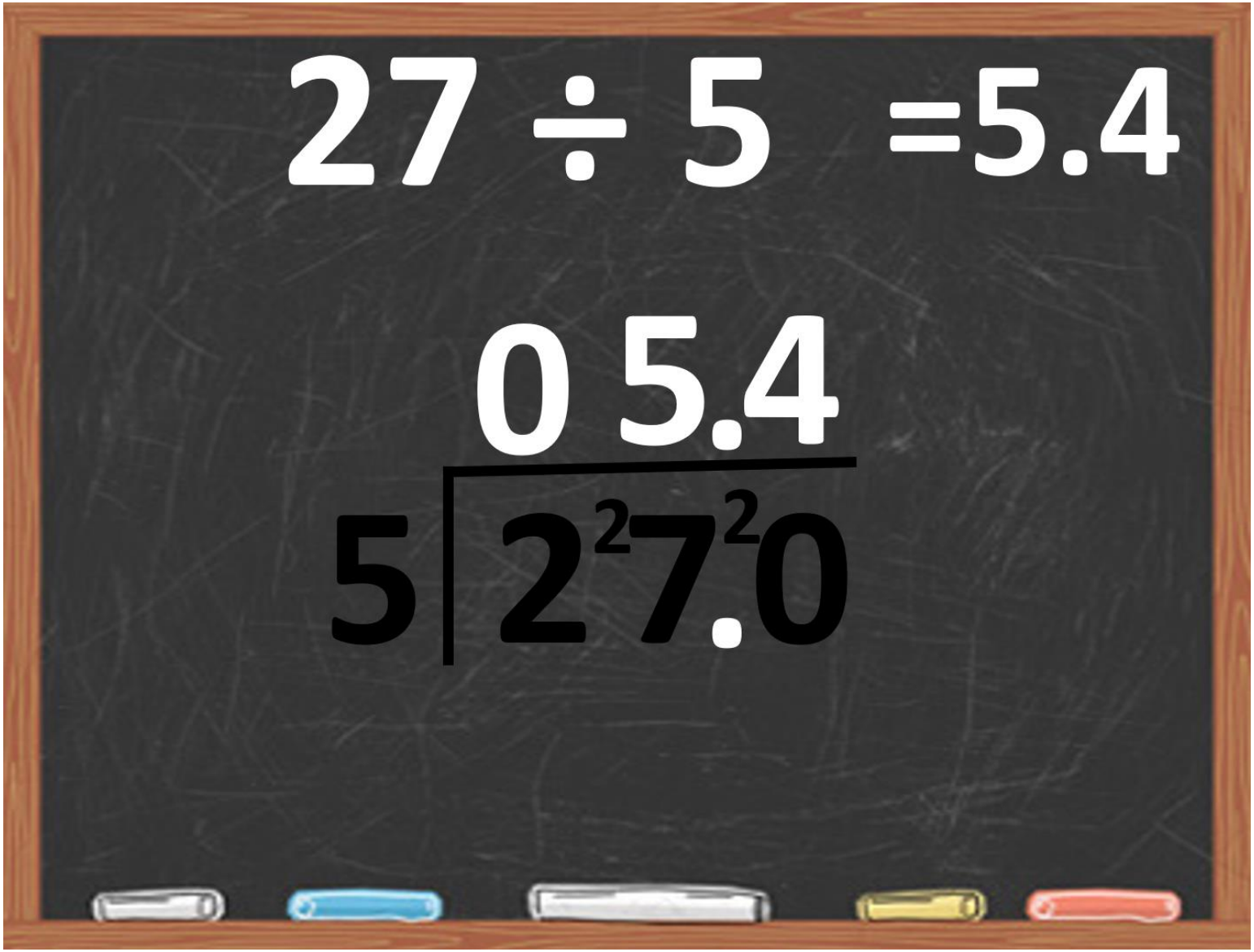
Start by asking how many times 5 goes into 2 = 0 with a remainder of 2. Put zero above the 2 and carry the remaining 2 over to the 7 to make that 27.



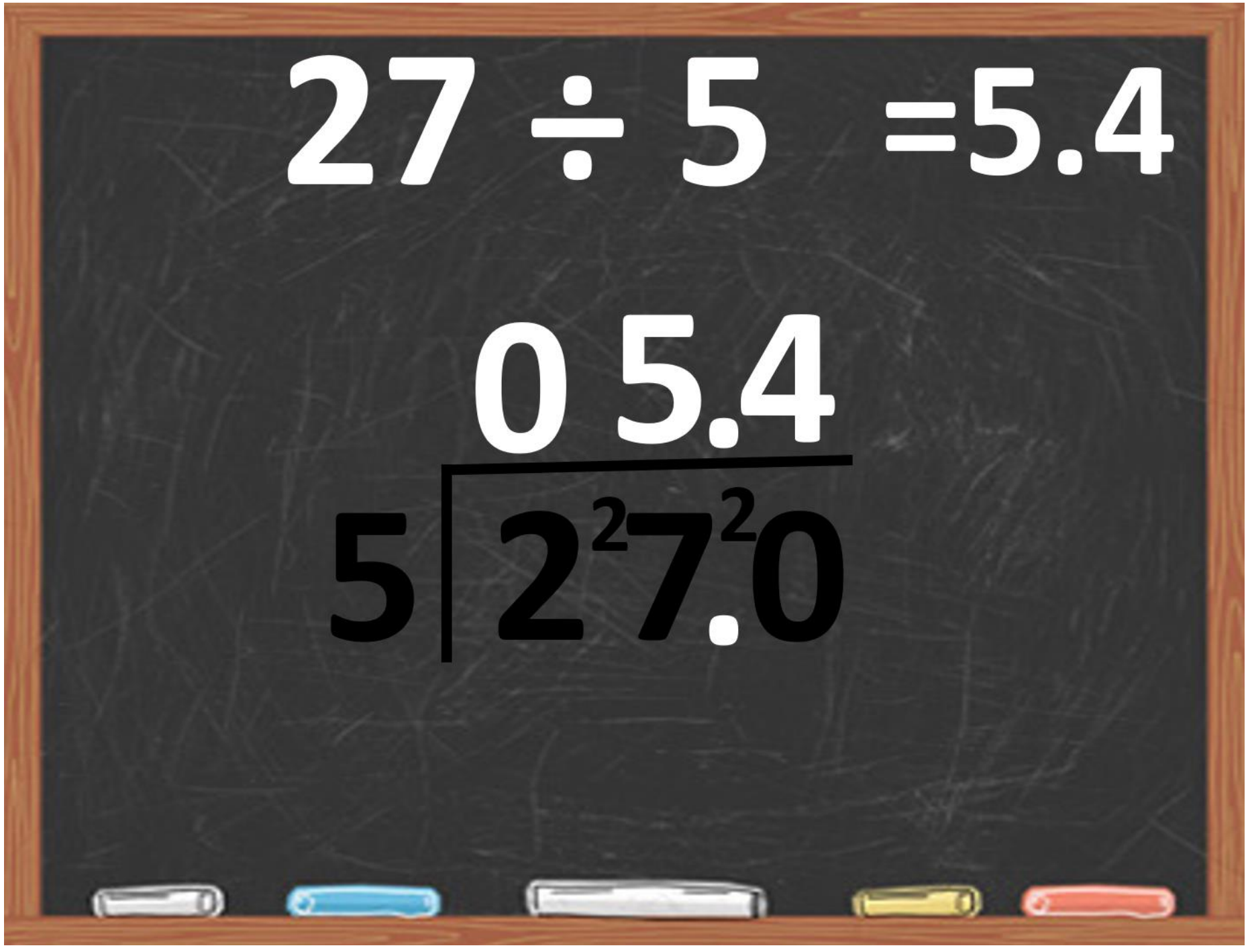
How many times does 5 go into 27 = 5 with a remainder of 2. Put a 5 above the 7 and a decimal point next to the 7 in the dividend. Then put a zero next to the decimal point. Carry the remaining 2 over to the zero to make that 20.



How many times does 5 go into 20 = 4 with no remainders.
Put 4 above the 0. But you haven't quite finished…

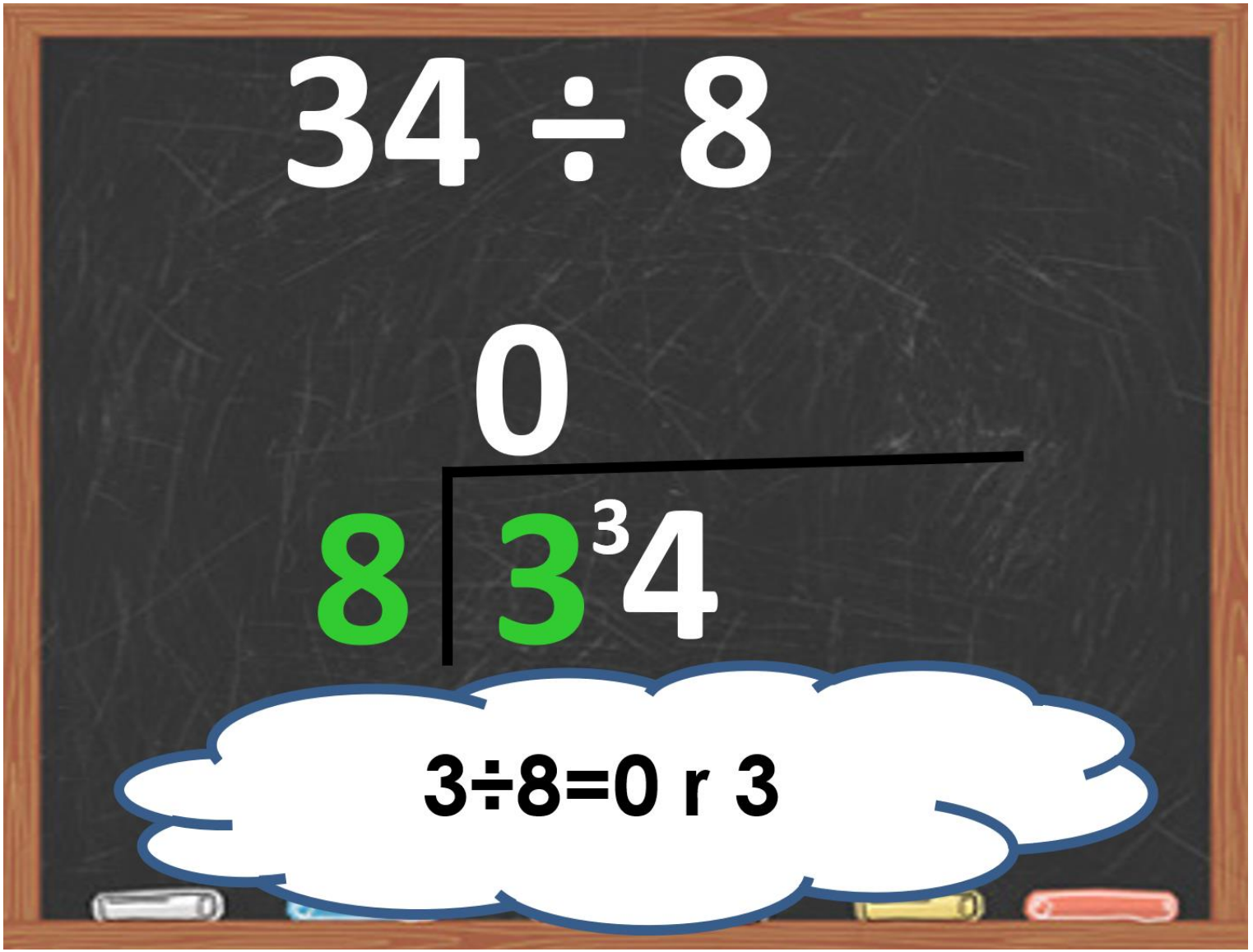


Finally, put a decimal point in the answer (quotient) above the decimal point in the dividend.

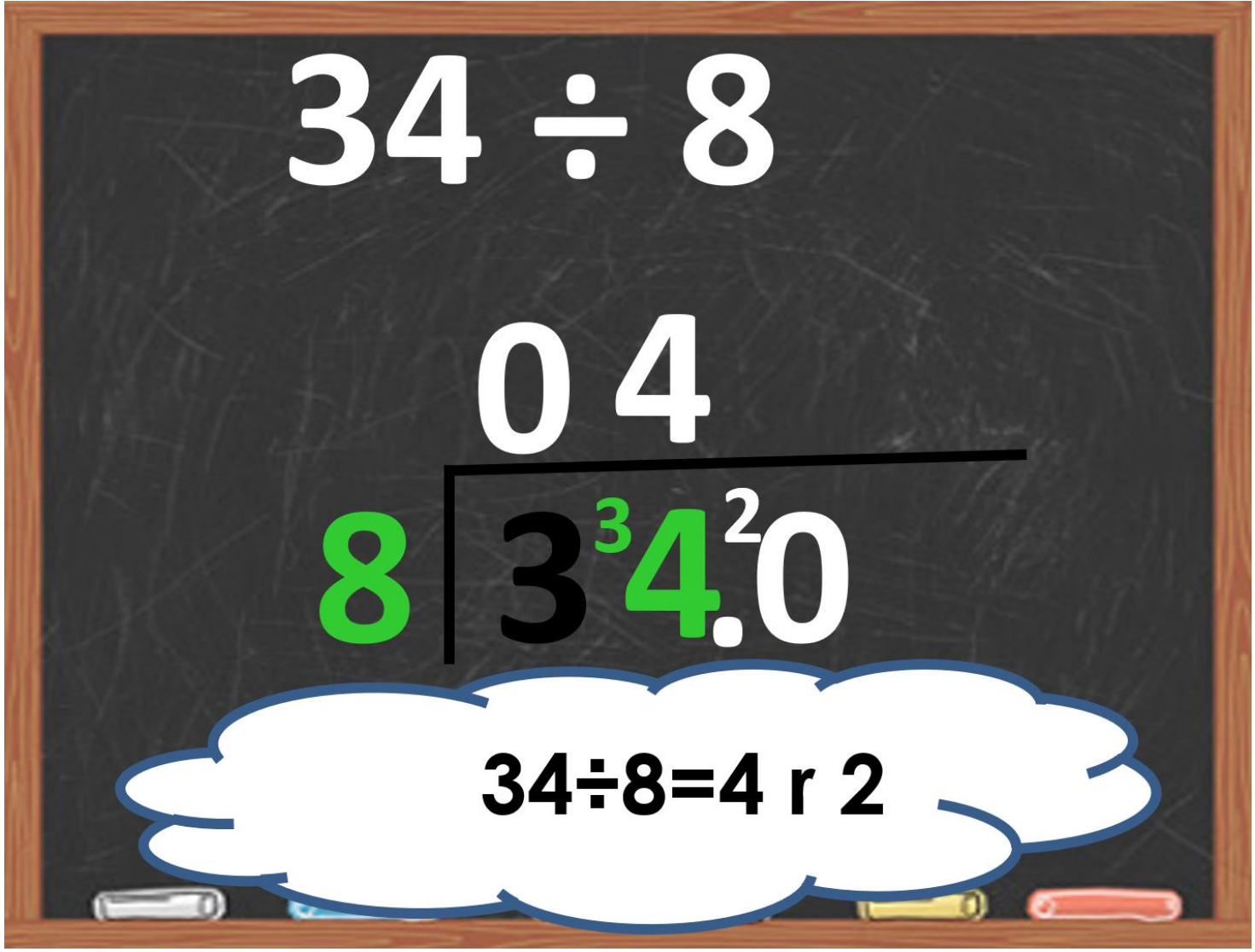

27 ÷ 5 =5.4
0 5.4
5 | 2 27 0

$$34 \div 8$$

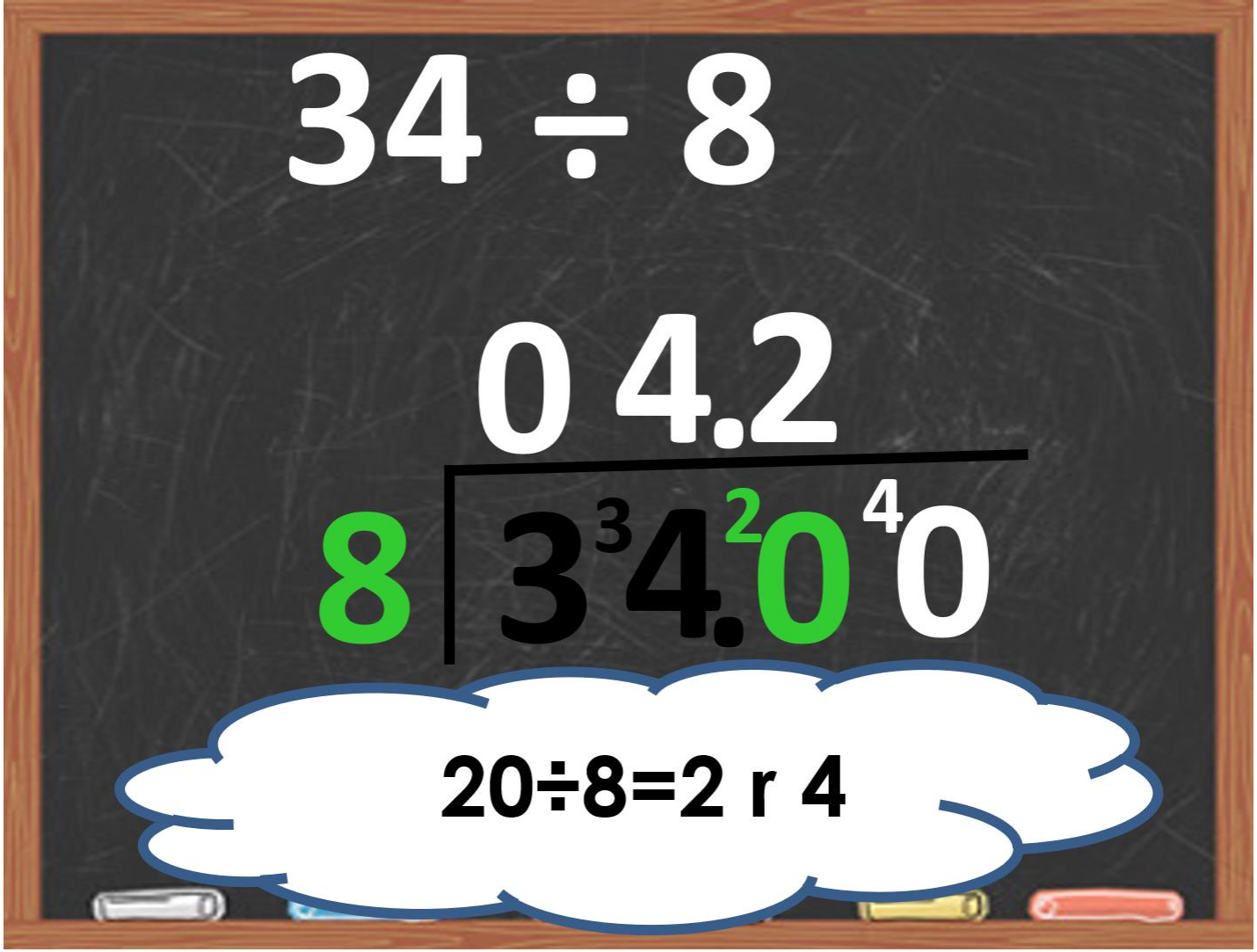
$$8\overline{)34}$$



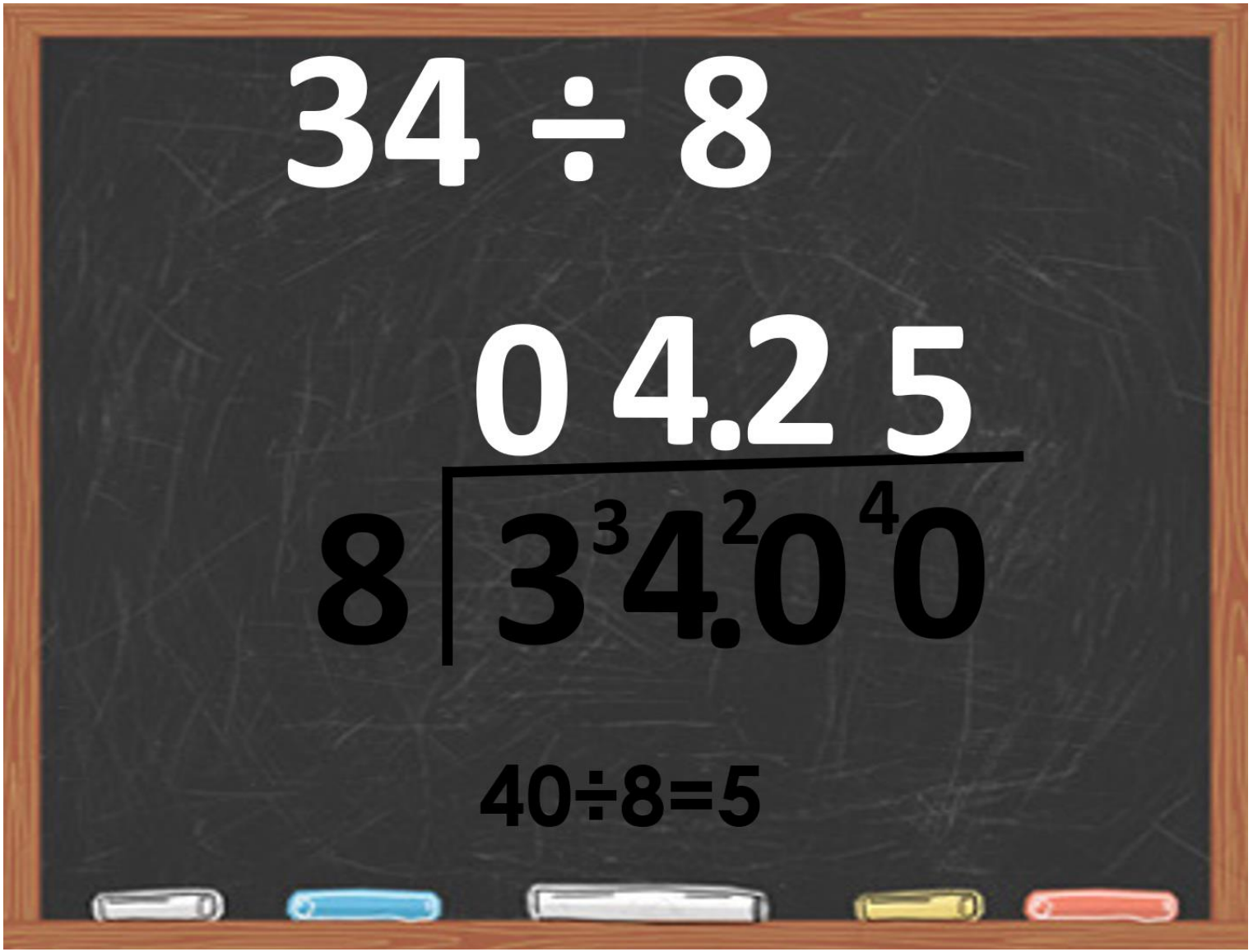
Start by asking how many times 8 goes into 3 = 0 with a remainder of 3. Put zero above the 3 and carry the remaining 3 over to the 4 to make that 34.



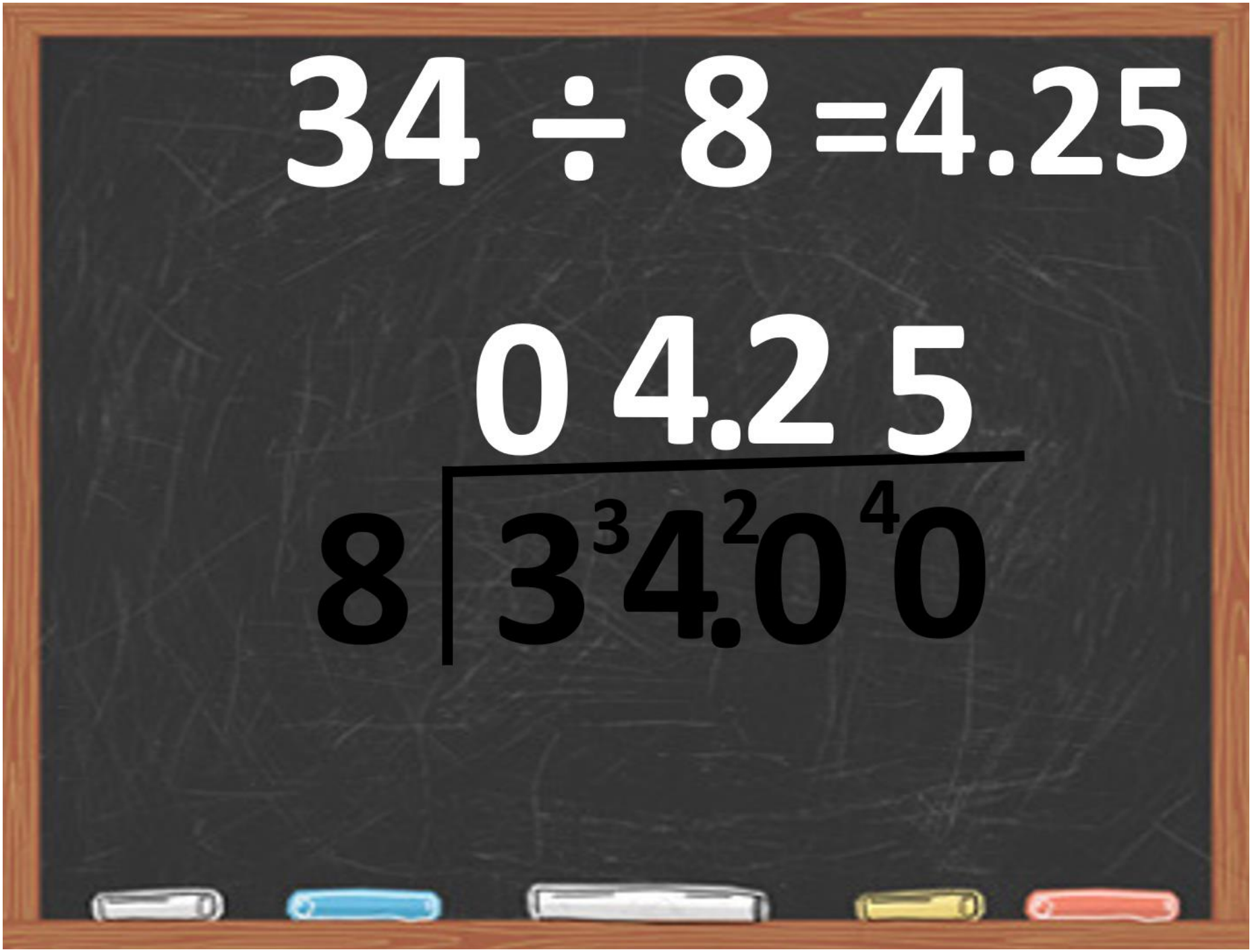
How many times does 8 go into 34 = 4 with a remainder of 2. Put a 4 above the 4 and a decimal point next to the 4 in the dividend. Then put a zero next to the decimal point. Carry the remaining 2 over to the zero to make that 20.



How many times does 8 go into 20 = 2 with a remainder of 4. Put a 2 above the zero and a decimal point next to the 4 in the answer (above the decimal point in the dividend). Then put another zero next to the first zero. Carry the remaining 4 over to the new zero to make that 40.



Finally, how many times does 8 go into 40 = 5 with no remainders. Put 5 above the second zero.


34 ÷ 8 =4.25
0 4.2 5
8 | 3 4 0 0
3 2 4

Your task:

Choose a worksheet to complete (or do them all if you want!)

Plenary:

Write a division word problem which involves money (£ and p) so that there is a decimal point involved.

Work out the answer too.

Send your problem (with the answer) to your teacher email address:

Rosen: rosen-2061@ivervillage-jun.bucks.sch.uk
Rowling: rowling-2061@ivervillage-jun.bucks.sch.uk