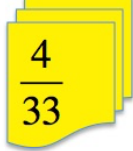


REPETITION

0.121212...



Multiply 0.121212... by 100 and you get
12.121212...

Subtract the smaller number from the bigger one and you get

$$99 \times 0.121212... = 12$$

The decimal point is used here. Those who prefer the decimal comma can write the decimals accordingly.

What does this tell you about the fraction $\frac{4}{33}$ in the picture?

How could you check your result in a different way?

Find the decimal equivalent of the fraction $\frac{4}{33}$ by dividing 4 by 33.

Now look at the two recurring decimals

$$0.44444...$$

$$4.44444...$$

Multiply the first number by 10. What do you get?

Subtract the smaller number from the bigger one. What do you get?

Can you use these two answers to find the common fraction that has the decimal equivalent 0.44444...?

To go from the recurring decimal to the fraction you multiply by 10, 100, or 1000 according to the number of digits that repeat themselves so that, when you do the subtraction, you get 9 or 99 or 999 ... times the decimal equal to a whole number.

Now match the following recurring decimals with their fraction equivalents and use the methods described above to check your answers.

0.151515...	$\frac{7}{9}$	0.454545...	$\frac{2}{3}$	$\frac{1}{7}$	0.777777...
$\frac{26}{111}$	0.666666...	0.14285714...	$\frac{5}{33}$	0.234234...	$\frac{5}{11}$

HELP

Do the 'Divide Divide' activity first <https://aiminghigh.aimssec.ac.za/divide-divide/>
You divide the numerator by the denominator to turn fractions into decimals. To find the decimal equivalent of $\frac{7}{9}$ divide 7 by 9. To turn decimals into fractions multiply the fractions with a single repeating digit by 10, with 2 repeating digits multiply by 100, with 3 repeating digits by 1000 ... etc

NEXT

Make up your own set of 6 matching pairs and put them, jumbled up, into a table like the one in this question. Exchange your set with another learner. Each of you should check and match up the set created by the other learner.