Math 9/10 Honours

Decimals & Fractions

Name _____ Date _____

1. Simplify: $(11 \div 1.\overline{11}\,) \div 0.1$

2. What is the reciprocal of $0.\overline{3} + 0.25$ expressed as a common fraction?

3. Multiply $0.\overline{81} \times 1.\overline{2}$ and express the product in simplest form.

4. What is the ratio of $0.1\overline{6}$ to $0.8\overline{3}$? Express your answer as a common fraction.

5. Calculate and express your answer as a common fraction: $\frac{0.\overline{3}+0.\overline{12}}{0.\overline{3}-0.\overline{12}}$

6. Write the simplest common fraction which names the same number as $0.8\overline{3}$.

7. Write the simplest common fraction which names the same number as $0.0\overline{3}$.

8. Write the simplest common fraction which names the same number as $0.\overline{24}$.

9. Write the common fraction equivalent to $0.5\overline{7}$.

10. What is the common fraction equivalent to $0.2\overline{7}$?

11. Express the sum $0.\overline{14} + 0.1\overline{4}$ as a common fraction.

12. Express $0.\overline{1} + 0.\overline{01} + 0.\overline{0001}$ as a common fraction.

13. Express $0.\overline{1} + 0.\overline{12} + 0.\overline{123}$ as a common fraction.

14. Express as a common fraction: $(0.\overline{09})(0.\overline{7})$

15. Express the following as a fraction in lowest terms: $0.\overline{1} + 0.\overline{2} + 0.\overline{01} + 0.\overline{02}$.

16. Express as a fraction: $0.\overline{1} + 0.\overline{001}$

17. Express as a mixed fraction: $\dfrac{0.\overline{85}}{.\overline{25}}$

18. What percent of $6 \div \frac{1}{2}$ is $6 \times \frac{1}{2}$?

19. In the addition problem shown, whole numbers less than 10 are missing from the boxes. If the problem is done correctly, what is the sum of the numbers in these boxes?

$$\begin{array}{r} \square 6\,3 \\ 7\square 2 \\ +\ 5\,8\square \\ \hline \square 0\,4\,2 \end{array}$$

20. What is the absolute value of the difference between $0.\overline{315}$ and $0.\overline{49}$? Express your answer as a common fraction.

21. Express $3.010101010101\ldots$ as a mixed fraction.

22. If: $\frac{1}{3}+\frac{1}{4}+\frac{1}{n}=1$, determine the value of n.

23. What is the 99th digit after the decimal point in the decimal expansion of : $\frac{2}{9}+\frac{3}{11}$?

24. Suppose n and D are integers with n positive and $0 \leq D \leq 9$. Determine n if $\frac{n}{810}=0.\overline{9D5}$

25. Challenge: Suppose you a and b are both positive 3 digit numbers. What are the values of a and b so that $\frac{a}{b}$ has the longest non-repeating decimal expansion?

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Answer List

1.	99	2.	$\frac{12}{7}$	3.	1
4.	$\frac{1}{5}$	5.	$\frac{15}{7}$	6.	$\frac{5}{6}$
7.	$\frac{1}{30}$	8.	$\frac{8}{33}$	9.	$\frac{26}{45}$
10.	$\frac{5}{18}$	11.	$\frac{283}{990}$	12.	$\frac{1213}{9999}$
13.	$\frac{1213}{9999}$	14.	$\frac{7}{99}$	15.	$\frac{4}{11}$
16.	$\frac{112}{999}$	17.	$3\frac{2}{5}$	18.	25 (percent)
19.	24	20.	24	21.	24
22.	24	23.	24	24.	24
25.	24				

Catalog List

1.	MCC AB 30	2.	MCC AB 32	3.	MCC AB 20
4.	MCC AB 48	5.	MCC AB 49	6.	MCC AD 2
7.	MCC AD 4	8.	MCC AD 7	9.	MCC AD 11
10.	MCC AD 12	11.	MCC AD 58	12.	MCC AD 60
13.		14.	MCC AD 61	15.	MCC AD 64
16.	MCC AD 50	17.	MCC AD 51	18.	MCC AD 76
19.	MCC AE 14	20.		21.	
22.		23.		24.	
25.					