

Final Exam Unit 3 Review

Name _____

1. a) Write each fraction as a decimal. Then identify as terminating or repeating.

i) $\frac{6}{8} = \frac{3}{4} = 0.75$ (T) ii) $\frac{1}{3} = 0.\bar{3}$ (R) iii) $\frac{3}{5} = \frac{6}{10} = 0.6$ (T) iv) $\frac{7}{8} = 0.875$ (T)

$$\begin{array}{r} 0.875 \\ 8 \overline{) 7.000} \\ \underline{64} \\ 60 \\ \underline{56} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

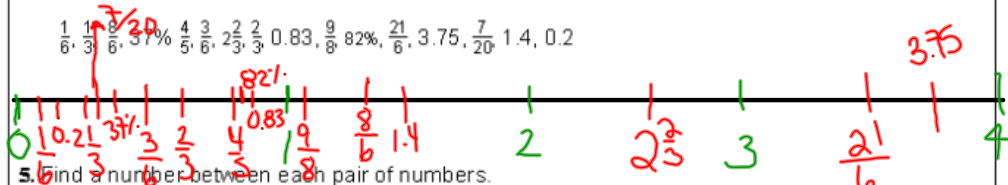
2. Write each decimal as a fraction in simplest form.

a) $0.02 = \frac{2}{100} = \frac{1}{50}$ b) $0.625 = \frac{625}{1000} = \frac{5}{8}$ c) $0.\bar{81} = \frac{81}{99}$

3. Write the fraction as a decimal and a percent.

a) $\frac{4}{5} = \frac{8}{10} = \frac{80}{100} = 0.80 = 80\%$ b) $\frac{3}{50} = \frac{6}{100} = 0.06 = 6\%$ c) $\frac{16}{25} = \frac{64}{100} = 0.64 = 64\%$ d) $\frac{18}{200} = \frac{9}{100} = 0.09 = 9\%$

4. Draw a number line. Order these numbers on the line.



5. Find a number between each pair of numbers.

a) $\frac{1}{4}, \frac{1}{3}$ → $0.25 - 0.\bar{3}$ b) $\frac{3}{5}, 0.8$ → $0.6 - 0.8$ c) $0.21, 0.22$ → 0.215

6. Several students purchased ribbon for their craft projects.

Student Name	Andrew	Joycelyn	Cam	Jesse
Ribbon purchased (m)	$\frac{5}{8}$	1.6	$\frac{19}{12}$	$\frac{12}{3}$

Who purchased the most ribbon and who purchased the least amount of ribbon? How do you know?

Jesse purchased the most ribbon.
 Cam purchased the least amount. I changed all fractions to decimals.

7. Estimate each sum or difference. Then calculate it.

a) $9.043 + 0.9 + 1.15$ b) $2.09 + 4.6 + 1.8$ c) $9.6 - 7.4$ d) $7.85 - 6.93$

a) $E = 9 + 1 + 1 = 11$

$$\begin{array}{r} 9.043 \\ + 0.900 \\ + 1.150 \\ \hline 11.093 \end{array}$$

b) $E = 2 + 5 + 2 = 9$

$$\begin{array}{r} 2.09 \\ + 4.60 \\ + 1.80 \\ \hline 8.49 \end{array}$$

c) $E = 10 - 7 = 3$

$$\begin{array}{r} 9.6 \\ - 7.4 \\ \hline 2.2 \end{array}$$

d) $E = 8 - 7 = 1$

$$\begin{array}{r} 7.85 \\ - 6.93 \\ \hline 0.92 \end{array}$$

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8. Althea bought 3.6 kg of beef, 1.7 kg of cheese, 3 kg of fish and 2.28 kg of rice. What was the total mass she had to carry?

$$\begin{array}{r} 3.60 \\ 1.70 \\ + 3.00 \\ 2.28 \\ \hline 10.58 \end{array}$$

$$3.6 + 1.7 + 3.0 + 2.28 = \boxed{10.58 \text{ Kg}}$$

9. A student added $2.35 + 4.256$ and got the sum 4.491. What mistake did the student make? What is the correct answer?

The student did not line up the decimals. The correct answer is $\boxed{6.606}$.

10. Dustin earns \$26.85 for each overtime hour he works. How much does he earn when he works 3.5 h of overtime?

$$26.85 \times 3.5$$

$$\begin{array}{r} 26.85 \\ \times 3.5 \\ \hline + 13425 \\ 80550 \\ \hline 93.975 \end{array}$$

$$\Rightarrow \$ \boxed{93.98}$$

11. Find the cost of each item at the grocery store.

a) 2.27 kg of carrots at \$1.79/kg

b) 0.65 kg of cheese at \$7.49/kg

Calculator

$$2.27 \times 1.79 = \boxed{4.0633} = \boxed{4.06}$$

$$0.65 \times 7.49 = \boxed{4.8685} = \boxed{4.87}$$

12. A skating rink is rectangular. Its dimensions are 19.8 m by 46.3 m. What is the area of the rink?

$$19.8 \times 46.3 = \boxed{916.74 \text{ m}^2}$$

$$\begin{array}{r} 19.8 \\ \times 46.3 \\ \hline 594 \\ 11880 \\ 79200 \\ \hline 916.74 \end{array}$$

13. Divide a) $9.45 \div 0.3$

b) $92.34 \div 0.6$

$$3 \overline{) 94.5} = 31.5$$

$$\boxed{31.5}$$

$$6 \overline{) 923.4} = 153.9$$

14. Anita bought 5.7 m of curtain material. It cost \$170.94. What is the cost of 1 m of material?

$$15 - 15 = 0 \text{ OK}$$

Calculator

$$\$170.94 \div 5.7 = 29.9895$$

$$\boxed{\$29.99} \text{ for 1 m.}$$

15. The area of the top of a rectangular picnic table is 1.26 m^2 . The width of the tabletop is 0.7 m. What is its length?

$$\boxed{1.26 \text{ m}^2}$$

$$l \times w = 1.26 \text{ m}^2$$

$$l \times 0.7 = 1.26 \text{ m}^2$$

$$\boxed{l = 1.8 \text{ m}}$$

$$1.26 \div 0.7 = 1.8$$

$$7 \overline{) 12.6} = 1.8$$

$$\begin{array}{r} 1.8 \\ 7 \overline{) 12.6} \\ \underline{7} \\ 56 \\ \underline{56} \\ 0 \text{ OR} \end{array}$$

Order of Operations!

Brackets
 Division
 Multiplication
 Addition
 Subtraction

Order they appear
 Order they appear

16. Evaluate.

a) $2.8 + 3.9 - 4.2$

$$\begin{array}{r} 2.8 \\ + 3.9 \\ \hline 6.7 \\ - 4.2 \\ \hline 2.5 \end{array}$$

b) $78.9 - 9.6 \div 0.2$

$$\begin{array}{r} 78.9 \\ - 48.0 \\ \hline 30.9 \end{array}$$

c) $6.8 \div 0.8$

$$\begin{array}{r} 8.5 \\ 8 \overline{) 68.0} \\ \underline{-64} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

d) 38.2×8.7

$$\begin{array}{r} 38.2 \\ \times 8.7 \\ \hline 2674 \\ 30560 \\ \hline 332.34 \end{array}$$

17. Ruth's test scores were: $\frac{17}{20}$, $\frac{21}{28}$, and $\frac{40}{50}$

Write each test score as a percent to find out which is best.

$\frac{17}{20} = \frac{85}{100} = 85\%$ *Best
 $\frac{21}{28} = \frac{3}{4} = 75\%$
 $\frac{40}{50} = \frac{80}{100} = 80\%$

18. Sam created a design on a grid. He coloured $\frac{1}{8}$ of the grid red and 0.375 of the grid green.

He coloured 40% of the grid blue. He coloured the rest of the grid purple. What percent of the grid is purple?

Red = $\frac{1}{8} = 12.5\%$
 Green = $0.375 = 37.5\%$
 Blue = 40%

$$\begin{array}{r} 12.5 \\ 37.5 \\ 40.0 \\ \hline 90.0 \end{array}$$

 $100\% - 90\% = 10\%$ is purple.

19. Calculate.

a) 10% of 78

$$\begin{array}{r} 78 \\ \times 0.1 \\ \hline 7.80 \end{array}$$

b) 15% of 60

$$\begin{array}{r} 60 \\ \times 0.15 \\ \hline 9 \end{array}$$

c) 20% of 120

$$\begin{array}{r} 120 \\ \times 0.20 \\ \hline 24 \end{array}$$

d) 65% of 84

$$\begin{array}{r} 84 \\ \times 0.65 \\ \hline 54.6 \end{array}$$

20. The regular price of a skateboard is \$72.99. Find the sale price after 30% discount and 13% tax is added.

Discount	Sale Price	Tax	Final Price
$\begin{array}{r} \$72.99 \\ \times 0.30 \\ \hline 21.897 \\ \$21.90 \end{array}$	$\begin{array}{r} 72.99 \\ - 21.90 \\ \hline \$51.09 \end{array}$	$\begin{array}{r} 51.09 \\ \times 0.13 \\ \hline 6.64 \end{array}$	$\begin{array}{r} 51.09 \\ + 6.64 \\ \hline 57.73 \\ \text{final price} \end{array}$

21. The bill at a restaurant is \$25.73. How much should the tip be if Allie wants to give the server about 15%.

$$\begin{array}{r} 25.73 \\ \times 0.15 \\ \hline 3.8595 = 3.86 \end{array}$$

 Allie should leave about \$4.00.