Adding & Subtracting Decimals

1. Write the problem vertically, lining up the decimal points
2. Add zeros, if necessary
3. Add or subtract the numbers as if they were whole numbers
4. Bring the decimal point straight down

ex: 12.8 - 1.52

$$\begin{array}{r} 12.^{7}\cancel{8}^{1}0 \\ -\ 1.52 \\ \hline 11.28 \end{array}$$

Multiplying Decimals

1. Write the problem vertically with the numbers lined up to the right (decimals do NOT need to be lined up)
2. Ignore the decimal points and multiply the numbers as if they were whole numbers
3. Count the total number of decimal places in the two factors and put a decimal point in the product so that it has that same number of decimal places

ex: 3.24 x 0.8

$$\begin{array}{r} {}^{1}\,{}^{3}3.24 \\ \times\ \ 0.8 \\ \hline 2592 \end{array}$$

3.24 → 2 decimal places
0.8 → 1 decimal place
2 + 1 = 3 decimal places

2.592

Dividing Decimals

1. Write the dividend under the division symbol and the divisor in front of the division symbol
2. Move the decimal in the divisor after the number and then move the decimal in the dividend the same number of places and bring it up
3. Ignore the decimal point and divide as if whole numbers
4. If there is a remainder, add a zero to the end of the dividend, bring it down, and then continue dividing until there is no remainder

ex: 32.3 ÷ 0.5

$$\begin{array}{r} 64.6 \\ 0.5\overline{)\,32.3^{\uparrow}0} \\ -30\downarrow \\ \hline 23 \\ -20 \\ \hline 30 \\ -30 \\ \hline 0 \end{array}$$

Find each sum or difference. Show your work.

49. 8.74 + 10.36	50. 37.4 – 8.55	51. 12.9 + 105.67	52. 450.89 – 213.33
53. 24.1 + 3.74	54. 14.76 – 9.8	55. 622.85 + 53.49	56. 67 – 14.06

Find each product or quotient. Show your work.

57. 4.5 x 6	58. 144.8 ÷ 4	59. 2.7 x 0.8	60. 6.2 ÷ 0.04
61. 8.9 x 2.5	62. 15.8 ÷ 0.5	63. 14.8 x 0.12	64. 16.2 ÷ 1.2

Solve each problem, showing all work.

65. Ryan spent $3.25 on lunch every day, Monday through Friday. If he had $20 at the start of the week, how much money did he have left after Friday?	66. Three friends went out to lunch. The bill came to $47.31. If they split the bill evenly, how much money does each friend owe?

Adding & Subtracting Fractions

1. Rename the fractions to equivalent fractions with common denominators
2. Add or subtract the numerators and keep the denominator the same
3. If mixed numbers, add or subtract the whole numbers
4. If possible, simplify the answer & change improper fractions to mixed numbers

ex: $4\frac{4}{9} + \frac{2}{3}$

$4\frac{4}{9} \quad \frac{\times 1}{\times 1} = \frac{4}{9}$

$+ \quad \frac{2}{3} \quad \frac{\times 3}{\times 3} = \frac{6}{9}$

$4 \quad \frac{10}{9} = \boxed{5\frac{1}{9}}$

Multiplying Fractions

1. Turn a whole number into a fraction by giving it a denominator of 1
2. Cross-simplify the fractions if possible
3. Multiply the 2 numerators and the 2 denominators
4. If possible, simplify the answer & change improper fractions to mixed numbers

ex: $6 \times \frac{2}{3}$

$\frac{\overset{2}{\cancel{6}}}{1} \times \frac{2}{\cancel{3}_{1}} = \frac{4}{1}$

$= \boxed{4}$

Dividing Fractions

1. Turn a whole number into a fraction by giving it a denominator of 1
2. Keep the 1st fraction the same, change the division symbol to multiplication, and flip the 2nd fraction to its reciprocal
3. Multiply the 2 fractions
4. If possible, simplify the answer & change improper fractions to mixed numbers

ex: $12 \div \frac{1}{2}$

$\frac{12}{1} \div \frac{1}{2}$

$\frac{12}{1} \times \frac{2}{1} = \frac{24}{1} = \boxed{24}$

Find each sum or difference. Show your work.

67. $\frac{7}{8} + \frac{5}{6}$	68. $\frac{9}{10} - \frac{1}{2}$	69. $\frac{3}{11} + \frac{2}{3}$	70. $\frac{11}{12} - \frac{13}{18}$
71. $4\frac{5}{9} + 7\frac{1}{3}$	72. $12\frac{9}{14} - 9\frac{3}{7}$	73. $3\frac{3}{5} + 2\frac{3}{4}$	74. $2\frac{2}{15} - 1\frac{2}{3}$

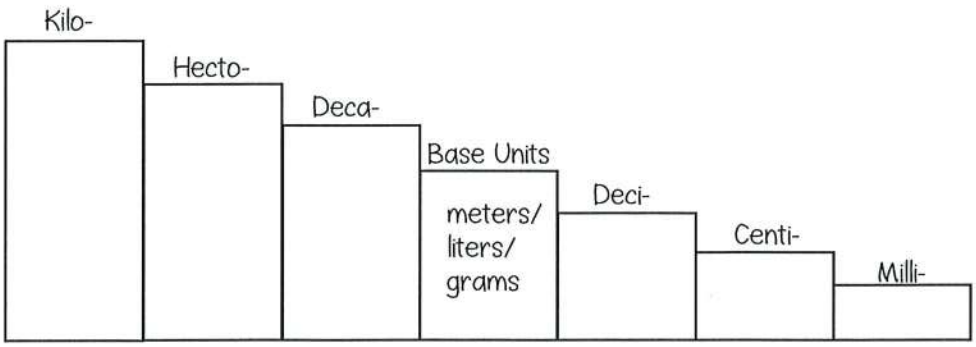
Find each product or quotient. Show your work.

75. $\frac{1}{6} \times \frac{3}{4}$	76. $6 \div \frac{1}{3}$	77. $15 \times \frac{2}{3}$	78. $\frac{1}{2} \div 3$
79. $\frac{1}{6} \times 10$	80. $\frac{1}{4} \div 2$	81. $\frac{5}{9} \times \frac{3}{20}$	82. $4 \div \frac{1}{5}$

Solve each problem, showing all work.

83. Jacqui ran 1 $^1/_2$ miles on Monday, Wednesday, and Friday and $^3/_4$ mile on Tuesday and Thursday. How far did she run in all?	84. Tyrell gave 3 packs of baseball cards to his friends. He gave each friend $^1/_3$ of a pack. How many friends got baseball cards?

The Metric System



Determine the direction and count the number of steps it takes to get from the starting unit to the unit you are converting to and move the decimal point the same number of places in that direction.

ex: 23 m = ____ cm

going from base unit step to centi- step, so need to move the decimal 2 places right

23.00

= 2,300 cm

The Customary System

Length	Weight	Capacity
1 ft = 12 in 1 yd = 3 ft 1 mi = 5,280 ft	1 lb = 16 oz 1 T = 2,000 lb	1 c = 8 fl oz 1 pt = 2 c 1 qt = 2 pt 1 gal = 4 qt

To convert from a larger unit to a smaller unit, multiply. To convert from a smaller unit to a larger unit, divide.

ex: 18 c = ____ pt

cups are smaller units of measure than pints, so need to divide

18 ÷ 2 = 9 pints

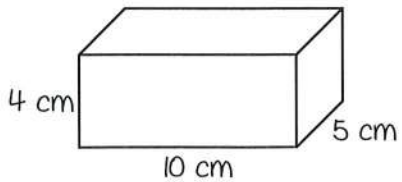
Volume

Volume is the number of cubic units inside a figure.

Volume of Rectangular Prism = length x width x height

Volume of Irregular Figure: count cubic units

ex: find the volume



V = 4 x 10 x 5 = 200 cm^3

Convert each Metric measurement. Show your work.

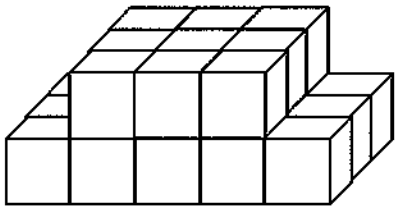
85. 1.9 km = _____ m	86. 23 g = _____ mg	87. 350 mℓ = _____ kℓ
88. 0.07 kg = _____ cg	89. 6 cm = _____ m	90. 35 mℓ = _____ ℓ

Convert each Customary measurement. Show your work.

91. 48 in = _____ ft	92. 6 pt = _____ c	93. 3 T = _____ lb
94. 1.5 mi = _____ ft	95. 32 pt = _____ gal	96. 32 oz = _____ lb

Find the volume of each figure. Show your work.

97.



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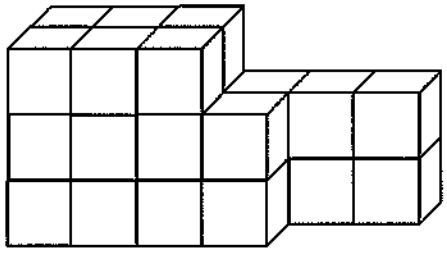

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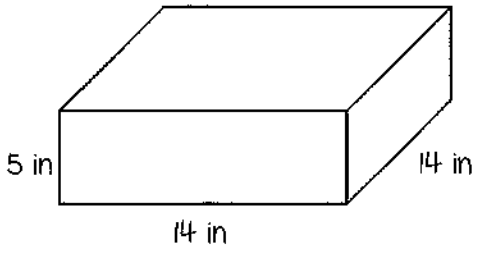

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