NO CALCULATOR! SHOW ALL WORK!

Whole Numbers – Adding and Subtracting

A) 451 + 23 + 659	B) 700 – 128
$\overset{1\ 1}{4}51$ 23 + 659 1134	$\overset{6\ 9\ 10}{\cancel{7}\cancel{0}\cancel{0}}$ −128 572

NO CALCULATOR! SHOW ALL WORK!

1. 623 + 433 + 56	2. 893 – 395
3. 1987 + 432 + 543 +28	4. 196 – 129 =
5. 98 + 45 – 32	6. 65 – 32 + 77
7. 439 + 53 – 488	8. 763 – 492 + 157

A) 653 x 29

$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ 2} \\ 653 \\ \times\ 29 \\ \hline 5877 \\ +13060 \\ \hline 18937 \end{array}$$

1820 ÷ 28

$$\begin{array}{r} 65 \\ 28\overline{)1820} \\ -168 \\ \hline 140 \\ -140 \end{array}$$

$$\begin{array}{r} 28 \\ \times\ 6 \\ \hline 168 \end{array} \qquad \begin{array}{r} 28 \\ \times\ 5 \\ \hline 140 \end{array}$$

NO CALCULATOR! SHOW ALL WORK!

1. 975 x 8	2. 109 x 7	3. 23 x 15
4. 73 x 18	5. 471 x 16	6. 981 x 65
7. 2970 ÷ 5	8. 2124 ÷ 4	9. 32751 ÷ 9
10. 5472 ÷ 19	11. 42800 ÷ 25	12. 3348 ÷ 31

Parentheses (Grouping Symbols)	$[(7 - 4)^2 + 3] + 15$
Exponents	$= [3^2 + 3] + 15$
Multiply or Divide, from left to right	$= [3 \bullet 3 + 3] + 15$
Add or Subtract, from left to right	$= [9 + 3] + 15$
	$= 12 + 15$
	$= 27$

NO CALCULATOR!

1. $6 \div 3 + 2 \bullet 7$	2. $5 + 8 \bullet 2 - 4$	3. $16 \div 8 \bullet 2^2$
4. $10 \div (3 + 2) + 9$	5. $7 \bullet [(18 - 6) - 6]$	6. $3 + (27 \div 9) - 5$
7. $(5 - 3)^2 + 3$	8. $[10 + (25 \bullet 2)] \div 6$	9. $(9 \bullet 2) + 18 \div 6$

Prime Factorization

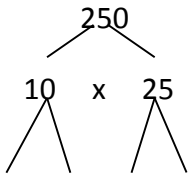
Use Euclid's Ladder (or a factor tree) to write the prime factorization.

$2\overline{)60}$
$2\overline{)30}$
$3\overline{)15}$
5

60 = 2 x 2 x 3 x 5

$2\overline{)250}$
$5\overline{)125}$
$5\overline{)25}$
5

125 = 2 X 5 X 5 X 5 **OR**



2 x 5 x 5 x 5

1. 64	2. 100	3. 72
4. 48	5. 36	6. 54

Find the GCF of 24 and 36.	24: 1, 2, 3, 4, 6, 8, **12**, 24 36: 1, 2, 3, 4, 6, 9, **12**, 18, 36	GCF of 24 and 36 is **12**.

No calculator! SHOW ALL WORK!

1. 18 and 54	2. 36 and 54
3. 24 and 60	4. 32 and 56
5. 100 and 75	6. 28 and 49
7. 35 and 50	8. 64 and 88

Find the LCM of 8 and 12.	8: 8, 16, **24**, 32, 40, 48, 56, . . . 12: 12, **24**, 36, 48, 60, 72, . . . LCM of 8 and 12 is **24**.

No calculator! SHOW ALL WORK!

1. 6 and 8	2. 4 and 6
3. 5 and 7	4. 12 and 18
5. 6 and 9	6. 12 and 9
7. 15 and 6	8. 14 and 4

Decimals – Adding and Subtracting

Rules:

1) Line up decimal points, if a number does not have a decimal point it is a whole number with the decimal point at the end.
2) Annex zeros to hold place.
3) Add or subtract vertically.
4) Bring down the decimal point.

$4.1 + 3 + 5.61 + 21$	$16 - 7.498$
4.10	16.000
3.00	- 7.498
5.61	8.502

NO CALCULATOR! SHOW ALL WORK!

1. 42.78 + 19.56	2. 0.0997 + 1.4	3. 6.29 + 5
4. 0.663 + 1.58	5. $62.74 + $1.75 + $12	6. 0.0674 + 0.12 + 0.0098
7. 40.75 – 17. 46	8. 0.95 – 0.68	9. 6 – 3.8
10. $60 - $31.74	11. $12.36 - $8.75	12. 21.007 – 4.678

Rules:

Multiplying

1) Line up digits, starting on the right.
2) Multiply
3) Place the decimal point in the answer by starting at the right and moving a number of places equal to the sum of the decimal places in both numbers multiplied.

(6.432)(4.15)

6.432 (3 decimal places)
x 4.15 (2 decimal places)
32160
64320
2572800
26.69280 (5 decimal places)

Dividing

1) If the divisor is not a whole number, move the decimal point To the right to make it a whole number and move the decimal Point in the dividend the same number of places.
2) Divide.
3) Bring the decimal point up.

27.216 ÷ 4.8

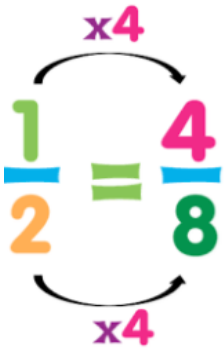
```
   5.67
48.)272.16
  -240
   321
  -288
    336
   -336
```

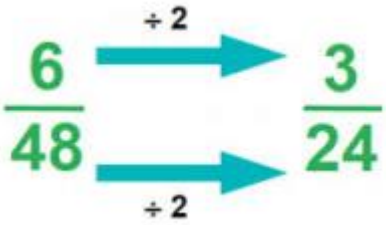
NO CALCULATOR! SHOW ALL WORK!

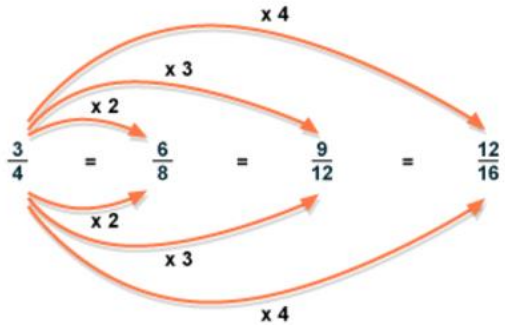
1. 5.4 x 0.07	2. 5.9 x 1.2
3. 69.3 x 0.15	4. 3.96 x 3.3

5. 9.01 x 0.48	6. 0.24 ÷ 0.8
7. 84.48 ÷ 0.88	8. 6.56 ÷ 4
9. 34.06 ÷ 0.13	10. 147 ÷ 0 .49

To find an equivalent fraction multiply or divide the numerator and denominator by the same value.





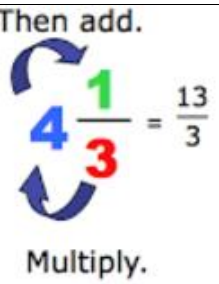


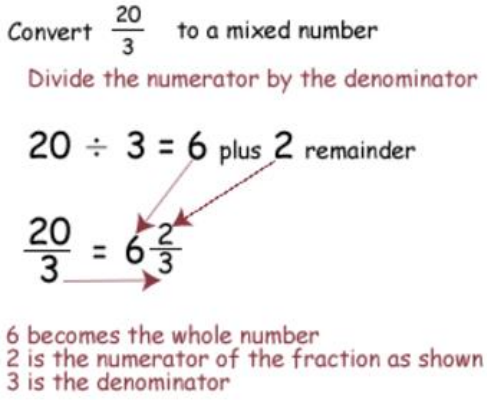
Name three equivalent fractions to the one given:

1. $\frac{4}{5}$	2. $\frac{10}{15}$
3. $\frac{1}{7}$	4. $\frac{16}{40}$
5. $\frac{12}{30}$	6. $\frac{6}{8}$
7. $\frac{2}{9}$	8. $\frac{14}{35}$
9. $\frac{18}{28}$	10. $\frac{80}{120}$

Multiply the whole number by the denominator and add the numerator.

Keep the same denominator.





Convert to Mixed Number or Improper Fractions:

1. $3\frac{1}{2} =$	**2.** $\frac{15}{2} =$
3. $7\frac{2}{3} =$	**4.** $\frac{31}{6} =$
5. $8\frac{3}{5} =$	**6.** $\frac{74}{9} =$
7. $2\frac{7}{9} =$	**8.** $\frac{49}{11} =$
9. $12\frac{5}{10} =$	**10.** $\frac{122}{13} =$

A. $\frac{3}{4}+\frac{1}{3}=$

$\frac{9}{12}+\frac{4}{12}=$

$\frac{13}{12}=1\frac{1}{12}$

If the denominators are different, find the least common multiple of the two numbers and convert both fractions to the matching common denominator.

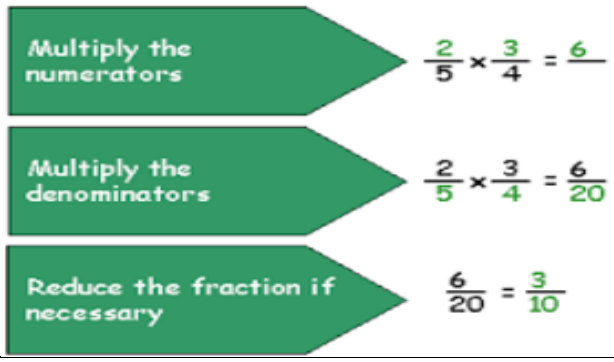
$\frac{5}{6}-\frac{3}{9}=$

$\frac{15}{18}-\frac{6}{18}=$

$\frac{11}{18}$

NO CALCULATOR! SHOW ALL WORK!

1. $\frac{2}{3}+\frac{1}{5}=$	2. $\frac{1}{7}+\frac{1}{3}=$	3. $\frac{2}{10}+\frac{1}{2}=$
4. $\frac{7}{8}-\frac{1}{2}=$	5. $\frac{5}{6}-\frac{2}{3}=$	6. $\frac{5}{9}-\frac{2}{4}=$
7. $\frac{7}{12}+\frac{2}{9}=$	8. $\frac{14}{15}+\frac{3}{5}=$	9. $\frac{9}{16}+\frac{5}{24}=$
10. $\frac{12}{16}-\frac{1}{4}=$	11. $\frac{27}{33}-\frac{5}{11}=$	12. $\frac{15}{18}-\frac{4}{9}=$



NO CALCULATOR! SHOW ALL WORK!

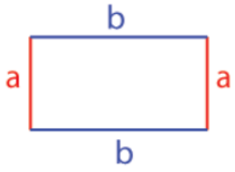
1. $\frac{1}{3} x \frac{1}{5} =$	2. $\frac{2}{7} x \frac{2}{5} =$	3. $\frac{4}{9} x \frac{1}{2} =$
4. $\frac{3}{8} x \frac{3}{4} =$	5. $\frac{9}{10} x \frac{1}{9} =$	6. $\frac{7}{12} x \frac{2}{5} =$
7. $\frac{6}{11} x \frac{2}{4} =$	8. $\frac{5}{6} x \frac{2}{9} =$	9. $\frac{12}{20} x \frac{3}{7} =$
10. $\frac{5}{13} x \frac{4}{6} =$	11. $\frac{15}{25} x \frac{5}{15} =$	12. $\frac{6}{10} x \frac{3}{9} =$

Perimeter:

Perimeter of a rectangle

The opposite sides of a rectangle are congruent.

$P = a + b + a + b$



$P = a + b + a + b$

Example:

If $a = 3$ units and $b = 5$ units then

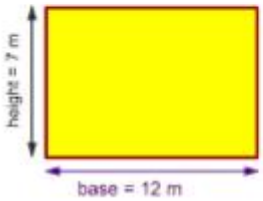
Perimeter (P) $= 3 + 5 + 3 + 5 = 16$ units

Area:

Area of Rectangle

The area of a Rectangle equals the base times the height.

$A = b \times h$

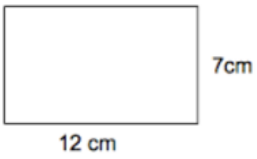


$A = b \times h$

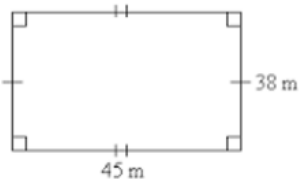
$A = 12 \times 7$

$A = 84\ m^2$

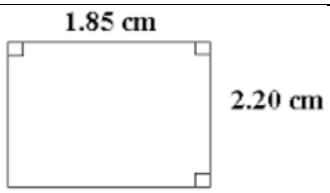
Find the perimeter and area of each shape:



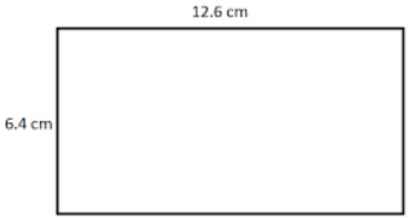
Perimeter:_____ Area:_____



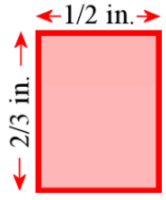
Perimeter:_____ Area:_____



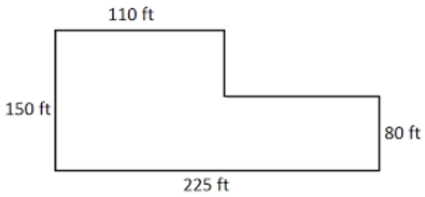
Perimeter:_____ Area:_____



Perimeter:_____ Area:_____



Perimeter:_____ Area:_____



Perimeter:_____ Area:_____