

2. [Decimal +,-]

Skill 2.1 Adding decimal numbers (1).

MM5.2 1 1 2 2 3 3 4 4
MM6.1 1 1 2 2 3 3 4 4

- Work vertically, lining up the decimal points.
- Add from right to left in the columns.

Q. $3.42 + 0.38 =$

A. 3.80

$$\begin{array}{r} 3.\overset{1}{4}2 \\ + 0.\overset{1}{3}8 \\ \hline 3.\overset{1}{8}0 \end{array}$$

$2 + 8 = 10$ carry 1, write 0
 $4 + 3 + \text{carry } 1 = 8$ write 8
 $3 + 0 = 3$ write 3

a) $0.14 + 0.08 =$

0.22

b) $7.5 + 3.8 =$

$$\begin{array}{r} 0.\overset{1}{1}4 \\ + 0.\overset{1}{0}8 \\ \hline 0.\overset{1}{2}2 \end{array}$$

$$\begin{array}{r} \overset{1}{7}.5 \\ + 3.8 \\ \hline \end{array}$$

c) $0.65 + 0.27 =$

d) $4.34 + 3.81 =$

$$\begin{array}{r} 0.\overset{1}{6}5 \\ + 0.\overset{1}{2}7 \\ \hline \end{array}$$

$$\begin{array}{r} 4.\overset{1}{3}4 \\ + 3.\overset{1}{8}1 \\ \hline \end{array}$$

e) $13.007 + 16.507 =$

f) $1.492 + 5.774 =$

$$\begin{array}{r} 1\overset{1}{3}.\overset{1}{0}07 \\ + 1\overset{1}{6}.\overset{1}{5}07 \\ \hline \end{array}$$

$$\begin{array}{r} 1.\overset{1}{4}92 \\ + \overset{1}{5}.\overset{1}{7}74 \\ \hline \end{array}$$

g) $3.45 + 2.05 =$

h) $16.097 + 11.332 =$

$$\begin{array}{r} 3.\overset{1}{4}5 \\ + \overset{1}{2}.\overset{1}{0}5 \\ \hline \end{array}$$

$$\begin{array}{r} \overset{1}{16}.\overset{1}{0}97 \\ + \overset{1}{11}.\overset{1}{3}32 \\ \hline \end{array}$$

i) $7.035 + 2.97 =$

j) $8.3 + 2.65 =$

$$\begin{array}{r} 7.\overset{1}{0}35 \\ + \overset{1}{2}.\overset{1}{9}7 \\ \hline \end{array}$$

$$\begin{array}{r} 8.\overset{1}{3} \\ + \overset{1}{2}.\overset{1}{6}5 \\ \hline \end{array}$$

Skill 2.1 Adding decimal numbers (2).

MM5.2 11 22 33 44
MM6.1 11 22 33 44

k) $33.46 + 8 =$

41.46

$$\begin{array}{r} 33.46 \\ + 8.00 \\ \hline 41.46 \end{array}$$

l) $14.245 + 9 =$

$$\begin{array}{r} 14.245 \\ + \\ \hline \end{array}$$

m) $5.09 + 6.005 =$

$$\begin{array}{r} 5.09 \\ + 6.005 \\ \hline \end{array}$$

n) $4.263 + 7 =$

$$\begin{array}{r} 4.263 \\ + \\ \hline \end{array}$$

o) $5.43 + 0.593 =$

$$\begin{array}{r} 5.43 \\ + 0.593 \\ \hline \end{array}$$

p) $0.82 + 19.6 =$

$$\begin{array}{r} 0.82 \\ + 19.6 \\ \hline \end{array}$$

q) $0.618 + 1.382 =$

$$\begin{array}{r} 0.618 \\ + 1.382 \\ \hline \end{array}$$

r) $3.8 + 12.207 =$

$$\begin{array}{r} 3.8 \\ + 12.207 \\ \hline \end{array}$$

s) $2.045 + 0.309 =$

$$\begin{array}{r} 2.045 \\ + 0.309 \\ \hline \end{array}$$

t) $0.008 + 10.04 =$

$$\begin{array}{r} 0.008 \\ + 10.04 \\ \hline \end{array}$$

u) $4.747 + 47.47 =$

$$\begin{array}{r} 4.747 \\ + 47.47 \\ \hline \end{array}$$

v) $0.407 + 0.605 =$

$$\begin{array}{r} 0.407 \\ + 0.605 \\ \hline \end{array}$$

Skill 2.2 Subtracting decimal numbers (1).

MM5.2 1 1 2 2 3 3 4 4
MM6.1 1 1 2 2 3 3 4 4

- Write the numbers vertically, lining up the decimal points.
- Subtract from right to left in the columns.
- If there is no digit in a space after the last digit of a decimal number, then you can add a zero if you need one.

Q. $5.09 - 0.983 =$

A. 4.107

$$\begin{array}{r} 5 \overset{1}{.} 0 \overset{1}{9} \overset{1}{0} \\ - 0 \overset{1}{.} 9 \overset{1}{8} \overset{1}{3} \\ \hline 4 \overset{1}{.} 1 \overset{1}{0} \overset{1}{7} \end{array}$$

Add a 0 after the 9.

$0 - 3 = ?$ Borrow 1 hundredth or 10 thousandths.

$10 - 3 = 7$ write 7

Pay back 1 hundredth.

$8 + 1 = 9$

$9 - 9 = 0$ write 0

$0 - 9 = ?$ Borrow 1 unit or 10 tenths.

$10 - 9 = 1$ write 1

Pay back 1 unit.

$0 + 1 = 1$

$5 - 1 = 4$ write 4

a) $5.62 - 0.51 =$

5.11

b) $9.6 - 7.8 =$

$$\begin{array}{r} 5 \overset{1}{.} 6 \overset{1}{2} \\ - 0 \overset{1}{.} 5 \overset{1}{1} \\ \hline 5 \overset{1}{.} 1 \overset{1}{1} \end{array}$$

$$\begin{array}{r} 9 \overset{1}{.} 6 \\ - 7 \overset{1}{.} 8 \\ \hline \end{array}$$

c) $9.07 - 4.56 =$

d) $1.068 - 0.097 =$

$$\begin{array}{r} 9 \overset{1}{.} 0 \overset{1}{7} \\ - 4 \overset{1}{.} 5 \overset{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \overset{1}{.} 0 \overset{1}{6} \overset{1}{8} \\ - 0 \overset{1}{.} 0 \overset{1}{9} \overset{1}{7} \\ \hline \end{array}$$

e) $25.45 - 15.72 =$

f) $10.37 - 4.6 =$

$$\begin{array}{r} 2 \overset{1}{5} \overset{1}{.} 4 \overset{1}{5} \\ - 1 \overset{1}{5} \overset{1}{.} 7 \overset{1}{2} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \overset{1}{0} \overset{1}{.} 3 \overset{1}{7} \\ - 4 \overset{1}{.} 6 \\ \hline \end{array}$$

g) $14.072 - 8 =$

h) $4.043 - 0.807 =$

$$\begin{array}{r} 1 \overset{1}{4} \overset{1}{.} 0 \overset{1}{7} \overset{1}{2} \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} \overset{1}{.} \\ - \overset{1}{.} \\ \hline \end{array}$$

Skill 2.2 Subtracting decimal numbers (2).

MM5.2 1 1 2 2 3 3 4 4
MM6.1 1 1 2 2 3 3 4 4

i) $1.36 - 0.058 =$

1.302

$$\begin{array}{r} 1.360 \\ - 0.058 \\ \hline 1.302 \end{array}$$

j) $5.4 - 0.75 =$

$$\begin{array}{r} 5.40 \\ - 0.75 \\ \hline \end{array}$$

k) $12.5 - 0.047 =$

$$\begin{array}{r} 12.500 \\ - 0.047 \\ \hline \end{array}$$

l) $0.086 - 0.009 =$

$$\begin{array}{r} 0.086 \\ - 0.009 \\ \hline \end{array}$$

m) $6.02 - 0.055 =$

$$\begin{array}{r} 6.020 \\ - 0.055 \\ \hline \end{array}$$

n) $24.9 - 6.33 =$

$$\begin{array}{r} 24.900 \\ - 6.330 \\ \hline \end{array}$$

o) $1.9 - 1.743 =$

$$\begin{array}{r} 1.900 \\ - 1.743 \\ \hline \end{array}$$

p) $15.08 - 0.491 =$

$$\begin{array}{r} 15.080 \\ - 0.491 \\ \hline \end{array}$$

q) $2.006 - 1.4 =$

$$\begin{array}{r} 2.006 \\ - 1.400 \\ \hline \end{array}$$

r) $23.33 - 16.66 =$

$$\begin{array}{r} 23.33 \\ - 16.66 \\ \hline \end{array}$$

s) $14.14 - 1.41 =$

$$\begin{array}{r} 14.14 \\ - 1.41 \\ \hline \end{array}$$

t) $5.3 - 0.503 =$

$$\begin{array}{r} 5.300 \\ - 0.503 \\ \hline \end{array}$$

Skill 2.3 Subtracting a decimal number from a whole number (1).

- Write a decimal point at the end of the whole number.
- Add as many zeros after the decimal point as there are decimal places in the decimal number.
- Work vertically, lining up the decimal points.
- Subtract from right to left in the columns.

Q. $10 - 0.38 =$

A. **9.62**

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{0} \overset{1}{0} \overset{1}{3} \overset{1}{8} \\ \hline \underline{\underline{9.62}} \end{array}$$

$0 - 8 = ?$ Borrow 10 hundredths.
 $10 - 8 = 2$ write 2
 Pay back 10 hundredths or 1 tenth.
 $3 + 1 = 4$
 $0 - 4 = ?$ Borrow 10 tenths.
 $10 - 4 = 6$ write 6
 Pay back 10 tenths or 1 unit.
 $0 + 1 = 1$
 $0 - 1 = ?$ Borrow 10 units.
 $10 - 1 = 9$ write 9
 Pay back 10 units or 1 ten.
 $1 - 1 = 0$

a) $1 - 0.07 =$

0.93

b) $1 - 0.09 =$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{0} \overset{1}{0} \overset{1}{7} \\ \hline \underline{\underline{0.93}} \end{array}$$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{0} \overset{1}{0} \overset{1}{9} \\ \hline \underline{\underline{\quad\quad\quad 1}} \end{array}$$

c) $10 - 2.7 =$

d) $1 - 0.034 =$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{2} \overset{1}{7} \\ \hline \underline{\underline{\quad\quad\quad}} \end{array}$$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{0} \overset{1}{0} \overset{1}{3} \overset{1}{4} \\ \hline \underline{\underline{\quad\quad\quad}} \end{array}$$

e) $10 - 0.84 =$

f) $10 - 5.637 =$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{0} \overset{1}{8} \overset{1}{4} \\ \hline \underline{\underline{\quad\quad\quad}} \end{array}$$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{5} \overset{1}{6} \overset{1}{3} \overset{1}{7} \\ \hline \underline{\underline{\quad\quad\quad}} \end{array}$$

g) $100 - 8.3 =$

h) $100 - 0.23 =$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{8} \overset{1}{3} \\ \hline \underline{\underline{\quad\quad\quad}} \end{array}$$

$$\begin{array}{r} \overset{1}{1} \overset{1}{0} \overset{1}{0} \overset{1}{0} \overset{1}{0} \\ - \overset{1}{0} \overset{1}{2} \overset{1}{3} \\ \hline \underline{\underline{\quad\quad\quad}} \end{array}$$

Skill 2.3 Subtracting a decimal number from a whole number (2).

MM5.2 1 1 2 2 3 3 4 4
MM6.1 1 1 2 2 3 3 4 4

i) $8 - 0.62 =$

$$\begin{array}{r} 8.\overset{1}{0}\overset{1}{0} \\ - 0.\overset{1}{6}\overset{1}{2} \\ \hline 7.\overset{1}{3}\overset{1}{8} \\ \hline \end{array}$$

7.38

j) $5 - 0.27 =$

$$\begin{array}{r} 5.\overset{1}{0}\overset{1}{0} \\ - . \\ \hline \\ \hline \end{array}$$

k) $9 - 0.604 =$

$$\begin{array}{r} 9.\overset{1}{0}\overset{1}{0}\overset{1}{0} \\ - . \\ \hline \\ \hline \end{array}$$

l) $6 - 2.71 =$

$$\begin{array}{r} .\overset{1}{0}\overset{1}{0} \\ - . \\ \hline \\ \hline \end{array}$$

m) $2 - 0.077 =$

$$\begin{array}{r} .\overset{1}{0}\overset{1}{0}\overset{1}{0} \\ - . \\ \hline \\ \hline \end{array}$$

n) $13 - 3.78 =$

$$\begin{array}{r} .\overset{1}{0}\overset{1}{0} \\ - . \\ \hline \\ \hline \end{array}$$

o) $14 - 9.567 =$

$$\begin{array}{r} . \\ - . \\ \hline \\ \hline \end{array}$$

p) $18 - 0.515 =$

$$\begin{array}{r} . \\ - . \\ \hline \\ \hline \end{array}$$

q) $20 - 2.02 =$

$$\begin{array}{r} \\ - \\ \hline \\ \hline \end{array}$$

r) $43 - 0.307 =$

$$\begin{array}{r} \\ - \\ \hline \\ \hline \end{array}$$

s) $31 - 6.003 =$

$$\begin{array}{r} \\ - \\ \hline \\ \hline \end{array}$$

t) $13 - 0.333 =$

$$\begin{array}{r} \\ - \\ \hline \\ \hline \end{array}$$

Skill 2.4 Adding and subtracting decimal numbers (1).

MM5.2 1 1 2 2 3 3 4 4
MM6.1 1 1 2 2 3 3 4 4

- Use BODMAS rules and add or subtract from left to right across the equation.
- Complete the operations one at a time.
- Work each operation vertically, lining up the decimal points.
- When in column format, add or subtract from right to left in the columns.

Q. $7.3 + 6.41 - 0.08 =$

A. **13.63**

Complete the operations from left to right

$$\begin{array}{r} 7.3 \\ + 6.41 \\ \hline 13.71 \\ - 0.08 \\ \hline 13.63 \end{array}$$

First add $7.3 + 6.41$

Then subtract 0.08 from the result.

a) $5.238 - 1.45 + 0.66 =$

4.448

$$\begin{array}{r} 5.238 \\ - 1.450 \\ \hline 3.788 \\ + 0.660 \\ \hline 4.448 \end{array}$$

b) $4.7 + 1.05 - 0.5 =$

$$\begin{array}{r} 4.70 \\ + 1.05 \\ \hline 5.75 \\ - 0.50 \\ \hline \end{array}$$

c) $13.3 - 4.6 + 0.77 =$

$$\begin{array}{r} 13.3 \\ - 4.6 \\ \hline \\ + \\ \hline \end{array}$$

d) $1 + 2.309 - 0.92 =$

$$\begin{array}{r} 1.000 \\ + 2.309 \\ \hline \\ - 0.92 \\ \hline \end{array}$$

e) $20.3 - 5.4 + 1.78 =$

$$\begin{array}{r} 20.3 \\ - 5.4 \\ \hline \\ + \\ \hline \end{array}$$

f) $3 + 6.049 - 1.796 =$

$$\begin{array}{r} 3.000 \\ + 6.049 \\ \hline \\ - 1.796 \\ \hline \end{array}$$

Skill 2.4 Adding and subtracting decimal numbers (2).

MM5.2 1 1 2 2 3 4 4
MM6.1 1 1 2 2 3 3 4 4

g) $0.99 + 1.067 - 0.48 =$

$$\begin{array}{r} 0.99 \\ + 1.067 \\ \hline \\ - 0.48 \\ \hline \\ \hline \end{array}$$

h) $21 - 14.46 + 3.9 =$

$$\begin{array}{r} 21.00 \\ - 14.46 \\ \hline \\ + \\ \hline \\ \hline \end{array}$$

i) $16.7 + 0.336 - 1.59 =$

$$\begin{array}{r} 16.7 \\ + 0.336 \\ \hline \\ - \\ \hline \\ \hline \end{array}$$

j) $10.504 - 3.07 - 1.06 =$

$$\begin{array}{r} 10.504 \\ - \\ \hline \\ - \\ \hline \\ \hline \end{array}$$

k) $0.223 + 11.094 - 8.4 =$

$$\begin{array}{r} + \\ \hline \\ \hline \\ - \\ \hline \\ \hline \end{array}$$

l) $21.75 - 0.336 - 1.9 =$

$$\begin{array}{r} - \\ \hline \\ \hline \\ - \\ \hline \\ \hline \end{array}$$

m) $18.093 - 13.007 + 0.256 =$

$$\begin{array}{r} - \\ \hline \\ \hline \\ + \\ \hline \\ \hline \end{array}$$

n) $1.08 - 0.241 + 12.121 =$

$$\begin{array}{r} - \\ \hline \\ \hline \\ + \\ \hline \\ \hline \end{array}$$