7. [Decimal +,–]

Skill 7.1 Adding decimal numbers (1).

MM4.2 1 1 2 2 3 3 4 4
MM5.1 1 1 2 2 3 3 4 4

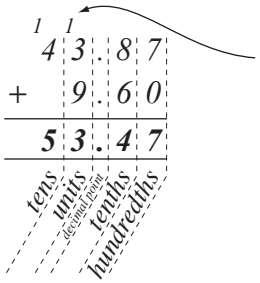
- Always keep your working columns in line, aligning the decimal points, the decimal places, units with units, tens with tens, etc.
- Add from right to left.

Q. $43.87 + 9.6 =$

A. $43.87 + 9.6 = \mathbf{53.47}$

```
  1 1
  4 3 . 8 7
+   9 . 6 0
-----------
  5 3 . 4 7
```

tens, units, decimal point, tenths, hundredths



Hundredths: $7 + 0 = 7 \Rightarrow$ 7 hundredths

Tenths: $8 + 6 = 14 \Rightarrow$ 4 tenths
Carry over 10 tenths as 1 unit

Units: $3 + 9 +$ carry $1 = 13$
$\Rightarrow$ 3 units
Carry over 10 units as 1 ten

Tens: $4 + 0 +$ carry $1 = 5$
$\Rightarrow$ 5 tens

a) $4.82 + 3.09 =$ 7.91

```
  1
  4 . 8 2
+ 3 . 0 9
---------
  7 . 9 1
```

b) $6.2 + 0.7 =$ ☐

```
  6 . 2
+ 0 . 7
-------
    .
```

c) $51.4 + 3.5 =$ ☐

```
  5 1 . 4
+   3 . 5
---------
      .
```

d) $78.4 + 25.3 =$ ☐

```
  7 8 . 4
+ 2 5 . 3
---------
      .
```

e) $4.27 + 2.56 =$ ☐

```
  4 . 2 7
+ 2 . 5 6
---------
    .
```

f) $32.6 + 48.3 =$ ☐

```
  3 2 . 6
+ 4 8 . 3
---------
      .
```

g) $6.72 + 0.43 =$ ☐

```
  6 . 7 2
+ 0 . 4 3
---------
```

h) $59.2 + 35.1 =$ ☐

```
  5 9 . 2
+ 3 5 . 1
---------
```

i) $84.3 + 0.9 =$ ☐

```
  8 4 . 3
+   0 . 9
---------
```

j) $3.52 + 40.08 =$ ☐

```
  3 . 5 2
+
---------
```

k) $1.94 + 27.6 =$ ☐

```
  1 . 9 4
---------
```

l) $51.4 + 3.58 =$ ☐

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Skill 7.1 Adding decimal numbers (2).

m) 9.86 + 0.09 = ☐

	9	.	8 6
+	0	.	0 9
		.	

n) 7.54 + 6.3 = ☐

	7	.	5 4
+	6	.	3

o) 65.7 + 8 = ☐

	6 5	.	7
+	8	.	0

p) 42.08 + 17.95 = ☐

	4 2	.	0 8
+			

q) 45.69 + 38.37 = ☐

	4 5	.	6 9
+			

r) 64.8 + 9.72 = ☐

+			

s) 31.54 + 29.8 = ☐

+			

t) 5.47 + 26.7 = ☐

+			

u) 9 + 26.82 = ☐

+			

v) 0.5 + 49.7 + 6.41 = ☐

	0	.	5
	4 9	.	7
+	6	.	4 1

w) 38.2 + 0.95 + 7 = ☐

	3 8	.	2
	0	.	9 5
+	7	.	

x) 51.46 + 8 + 4.9 = ☐

	5 1	.	4 6
+			

y) 0.8 + 25.6 + 7.59 = ☐

			0 . 8
+			

z) 23.5 + 6.974 + 0.69 = ☐

+			

A) 0.258 + 7.9 + 24.56 = ☐

+			

Skill 7.2 Subtracting decimal numbers (1).

MM4.2 1 1 2 2 3 3 4 4
MM5.1 1 1 2 2 3 3 4 4

- Always keep your working columns in line, aligning the decimal points, the decimal places, units with units, tens with tens, etc.
- Subtract from right to left.
- Whenever a number cannot be subtracted from another number to give a positive result then use either the decomposition or equal addition method. (see skill 5.4, page 12)

Q. $45.23 - 27.84 =$

A. $45.23 - 27.84 = \mathbf{17.39}$

	tens	units	decimal point	tenths	hundredths
		1		1	1
	4	5	.	2	3
−	2	7	.	8	4
	1	7	.	3	9

Using the **Equal Addition** method

Hundredths: $3 - 4 = ?$
Add 10 hundredths to the 3 and 10 hundredths (1 tenth) to the 8 (bottom number in the tenths column)
$13 - 4 = 9$ hundredths

Tenths: $2 - (8 + 1) = ?$
Add 10 tenths to the 2 and 10 tenths (1 unit) to the 7 (bottom number in the units column)
$12 - 9 = 3$ tenths

Units: $5 - (7 + 1) = ?$
Add 10 units to the 5 and 10 units (1 ten) to the 2 (bottom number in the tens column)
$15 - 8 = 7$ units

Tens: $4 - (2 + 1) = 1$ ten

a) $6.37 - 2.76 =$ 3.61

	5	13	
	~~6~~	. ~~3~~	7
−	2	. 7	6
	3	. 6	1

Use decomposition

b) $4.8 - 0.3 =$ ☐

	4	. 8
−	0	. 3
		.

c) $62.9 - 1.5 =$ ☐

	6 2	. 9
−	1	. 5
		.

d) $87.3 - 64.5 =$ ☐

	8 7	. 3
−	6 4	. 5
		.

e) $6.57 - 1.93 =$ ☐

	6	. 5 7
−	1	. 9 3
		.

f) $57.6 - 38.2 =$ ☐

	5 7	. 6
−	3 8	. 2
		.

g) $8.46 - 3.95 =$ ☐

	8	. 4 6
−	3	. 9 5

h) $74.5 - 35.8 =$ ☐

	7 4	. 5
−	3 5	. 8

i) $34.7 - 28.7 =$ ☐

	3 4	. 7
−	2 8	. 7

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Skill 7.2 Subtracting decimal numbers (2).

j) 27.4 – 9.6 = ☐

2 7 . 4
– 9 . 6

k) 8.24 – 0.75 = ☐

8 . 2 4
– 0 . 7 5

l) 43.8 – 8.9 = ☐

4 3 . 8
– 8 . 9

m) 63.45 – 6.52 = ☐

6 3 . 4 5
–

n) 28.31 – 9.4 = ☐

2 8 . 3 1
–

o) 25.4 – 8.63 = ☐

2 5 . 4
–

p) 55.63 – 26.8 = ☐

5 5 . 6 3
–

q) 37.4 – 6.91 = ☐

–

r) 46.2 – 8.37 = ☐

–

s) 45.23 – 27.84 = ☐

–

t) 34.21 – 18.45 = ☐

–

u) 65.62 – 19.84 = ☐

–

v) 90.03 – 4.08 = ☐

9 0 . 0 3
–

w) 80.5 – 4.63 = ☐

–

x) 25.46 – 7.59 = ☐

–

y) 35.46 – 27.48 = ☐

–

z) 66.23 – 19.54 = ☐

–

A) 57.2 – 9.84 = ☐

–

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Skill 7.3 Subtracting a decimal number from a whole number.

- 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.
- Whenever a digit cannot be subtracted from another digit to give a positive result then use either the decomposition or equal addition method. (see skill 5.4, page 12)

Q. $10 - 5.91 =$

A. $10 - 5.91 =$
$= 10.00 - 5.91$
$= \mathbf{4.09}$

	tens	units	tenths	hundredths
	0	9	9	10
	~~1~~	~~0~~	~~0~~	~~0~~
−		5	9	1
		4	**0**	**9**

Using the **Decomposition** method:

Work from right to left until you reach a number you can borrow from, in this case the 1 ten. Restructure the 1 ten to 9 units, 9 tenths and 10 hundredths.

Hundredths: 10 − 1 = 9 hundredths

Tenths: 9 − 9 = 0 tenths

Units: 9 − 5 = 4 units

Tens: 0 − 0 = 0 tens

a) $3 - 1.27 =$ **1.73**

	3	.	0 0
−	1	.	2 7
	1	.	7 3

Use equal addition

b) $8 - 3.7 =$

	8	.	0
−	3	.	7
		.	

c) $4 - 2.75 =$

	4	.	
−	2	.	7 5
		.	

d) $4 - 1.61 =$

	4	.	
−	1	.	6 1

e) $7 - 3.38 =$

	7	.	
−	3	.	3 8

f) $8 - 3.25 =$

	8	.	
−			

g) $13 - 2.54 =$

	1	3	.
−			

h) $19 - 3.87 =$

−			

i) $22 - 7.43 =$

−			

j) $7 - 0.357 =$

	~~7~~	.	~~0~~ ~~0~~ ~~0~~
−	0	.	3 5 7
	6	.	6 4 3

Use decomposition

k) $9 - 0.619 =$

	9	.	
−			

l) $6 - 0.802 =$

−			

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