

Number Sense – AP Book 7, Part 1: Unit 5

AP Book NS7-32

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- 1 000
 - 10; 10 000
 - $10 \times 10 \times 10 \times 10$
 - 1 000
 - 10; 100
 - 1; 1 000
- Circle:

 $\frac{3}{10}; \frac{25}{100}; \frac{333}{1000}; \frac{1}{100};$

 $\frac{4}{1000}; \frac{48}{10}$
- 20
 - 5; 50
 - 9; 90
- 60
 - 7
 - 30
- 3
 - 55; 5; 5
 - 84; 8; 4
- Teacher to check shading.
 - 4; 7
 - 9; 1
 - 3; 6
- 20
 - $\times 10; 60$
 - $\times 10; 250$
 - $\times 10; 810$
 - $\times 100; 900$
 - $\div 10; 8$
 - $\div 10; 36$
 - $\div 10; 42$
 - $\div 10; 5$
 - $\div 10; 3$
- 60
 - $\times 10; 350$
 - $\times 10; 20$
 - $\times 100; 400$
 - $\div 10; 3$
 - $\div 10; 71$
- 50; 500
 - 9; 900
 - 3; 30

- 750
- 7
- 100; 1 000
- 780
- 57

AP Book NS7-33

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- 6
 - 0.18
 - 0.92
 - 0.65
 - 0.243
 - 0.315
- to the right
- 0.3
 - 0.763
 - 0.905
 - 0.536
 - 0.8
- thousandths; 1 000
 - tenths; 10
 - hundredths; 100
 - tenths; 10
 - thousandths; 1 000
- 0.0
 - 0.00; 0.005
 - 0.0; 0.03
 - 0.00; 0.001
- 7
 - 0.3
 - 0.9
 - 0.07
 - 0.05
 - 0.04
 - 0.007
 - 0.002
 - 0.006
- $0.0\overline{7}$; seven hundredths
 - $0.00\overline{5}$; five thousandths
 - $0.0\overline{2}$; two hundredths
 - $0.\overline{3}$; three tenths

- $0.00\overline{5}$; five thousandths

- hundredths
 - hundredths
 - tenths
- 1; 6; 3
 - 0; 8
 - 7; 6
 - 2; 0; 1
- 352
 - 0.416
 - 0.5
 - 0.82
 - 0.035
 - 0.503
- 0.032
 - 0.135
 - 98.73
 - 0.03

AP Book NS7-34

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- | | | | |
|----------------|-----|------|------------------|
| 2 | 0.2 | 0.20 | $\frac{20}{100}$ |
| $\frac{7}{10}$ | 0.7 | 0.70 | $\frac{70}{100}$ |
- 80
 - 4; 4; 40
 - 3; 3; 30
- 30
 - 02; 20
 - 07; 7; 070
 - 09; 9; 90
- 47
 - 68; 6; 8; 68; 68
 - 86; 8; 6; 86; 86
 - 25; 2; 5; 25; 25
- 35
 - 61
 - 18
 - 03
- 5; 2; 52
 - 4; 0; 40
 - 9; 3; 93

- 23
 - 61
 - 12
- 7; 1; 5; 715
 - 1; 6; 4; 164; 164
 - 4; 2; 42; 042
- 275
 - 602
 - 199
 - 056
- 3; 4; 5; 345
 - 6; 2; 9; 629
 - 1; 1; 8; 118
- 0.123
 - 0.204
 - 0.018
 - 0.079
- Circle: b), f), g), h), j)

- $\frac{3}{10}$
- $\frac{57}{100}$
- $\frac{654}{1000}$
- $\frac{45}{100}$
- $\frac{3}{100}$
- $\frac{56}{1000}$
- $\frac{2}{1000}$
- $\frac{1}{10}$
- $\frac{704}{1000}$
- $\frac{69}{1000}$

AP Book NS7-35

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- 3 dimes and 1 penny; 3 tenths & 1 hundredth; 31 pennies; 31 hundredths

Number Sense – AP Book 7, Part 1: Unit 5 (continued)

- c) 7 dimes and 3 pennies;
7 tenths and 3 hundredths;
73 pennies;
73 hundredths
- d) 3 dimes and 1 penny;
3 tenths and 1 hundredth;
31 pennies;
31 hundredths
2. a) 2 tenths and 8 hundredths;
28 centimetres;
28 hundredths
- b) 1 decimetre
6 centimetres;
1 tenth and 6 hundredths;
16 centimetres;
16 hundredths
3. a) 3, 2; 3, 0;
3, 2; 3, 0;
32; 30;
32 30
- b) 3, 6; 4, 0;
3, 6; 4, 0;
36; 40;
36 40
4. To compare like that, she needs to think of 0.9 as 0.90.
5. millimetres

AP Book NS7-36

page 134

1. b) 196.4
c) 25.76
d) 8.036
e) 0.38
f) 10.004
2. a) 7; 5
b) 4; 3; 2
c) 2; 6
d) 2; 5; 0; 4
e) 7; 0; 1; 5
3. a) 24.352
b) 9.416

- c) 48.72
d) 333.33

4.

		8	6	7	5
	2	5	0	9	3
6	7	0	0	5	
		4	9	0	7
- b) one; thirty-two
c) thirty-six; seven
d) seven; fifty-two
e) twenty;
one hundred four
5. b) three; hundredths
c) hundredths
d) fifteen; thousandths
6. b) three; hundredths
c) hundredths
d) fifteen; thousandths
7. a) 45; 45
b) 1; 3; 1.03; 1; 3
c) 1; 21; 1.21; 1; 21
d) 5; 54; 5.54; 5; 54
8. a) $3\frac{21}{100}$
b) $1\frac{62}{100}$
c) $8\frac{6}{10}$
d) $9\frac{137}{1000}$
e) $31\frac{76}{100}$
f) $23\frac{665}{1000}$
g) $1\frac{7}{10}$
h) $82\frac{505}{1000}$
9. a) 2.17
b) 1.67
c) 76.7
d) 5.375
e) 3.09
f) 29.005
10. $12\frac{52}{100}$ is larger since:
 $12.520 > 12.057$.

AP Book NS7-37

page 136

1. $A = \frac{2}{10}$
 $B = \frac{8}{10}$
 $C = 1\frac{4}{10}$
 $D = 2\frac{1}{10}$
 $E = 2\frac{7}{10}$
2. a) 0.2; 0.3; 0.4; 0.5;
0.6; 0.7; 0.8; 0.9
b) 0.5
3. a) 0
b) 1
c) $\frac{1}{2}$
d) 1
e) $\frac{1}{2}$
f) 0
4. a) Teacher to check.
b) C, E, F, A, G, D, B
5. a) Teacher to check.
Sample:
Each larger bar represents 0.10 or $\frac{1}{10}$ of the line, so count over 5 from 0 to get to 0.50.
b) Teacher to check.
Sample Strategy:
Convert all to decimals first, then find the tenths place and count over (using the shorter lines) to the hundredths place.
c) C, B, D, A
6. a) <
b) <
c) >
d) <
e) <
f) >

- g) <
h) >
7. a) Circle:
0.06; $1\frac{7}{10}$; 2.4
b) Teacher to check.
Samples:
i) 0.5
ii) 1.5
iii) 2
iv) 2.5

AP Book NS7-38

page 138

1. a) 40, 60;
 $\frac{4}{10}, \frac{50}{100}, \frac{6}{10}$
b) $\frac{20}{100}, \frac{90}{100}$;
 $\frac{2}{10}, \frac{30}{100}, \frac{9}{10}$
2. b) 0.90; 90
c) 0.10; 10
3. b) 0.72 0.80 0.70
c) 3.50 3.45 3.60
4. a) 640, 680;
 $\frac{72}{100}, \frac{64}{100}, \frac{68}{100}$
b) 540, 50, 500;
 $\frac{5}{10}, \frac{504}{1000}, \frac{54}{100}$
5. a) 0.750; 750
b) 0.930; 930
c) 0.200; 200
6. a) 0.120 0.046 0.400
b) 0.200 0.680 0.092
c) 7.500 7.450 7.600
7. a) 37, 44;
4.4, 3.7
b) 305, 276;
3.05, 2.97, 2.76
c) 1700, 1400;
1.7, 1.4, 1.3
d) 7587, 7980;
7.98, 7.587, 7.2

Number Sense – AP Book 7, Part 1: Unit 5 (continued)

8. Teacher to check.

Samples:

- a) 0.85
- b) 0.65
- c) 0.387
- d) 0.46

9. a)

	0	2	4	2
	1	3	6	8
	1	7	0	
	2	0	5	

2.05, 1.70, 1.368, 0.242

b)

3	7	0	3
	7	3	0
	3	7	0
	6	7	3

37.03, 7.306, 6.73, 3.706

c)

4	5	2	5
4	5	2	9
4	5	1	9
4	5	2	1

45.29, 45.25, 45.210, 45.193

d)

	0	6	5	4
	0	5	5	5
	0	6	5	5
	0	5	5	4

0.655, 0.654, 0.555, 0.554

- 10. a) 7; 0; 1
- b) 13.5; 14.5
- c) 9.45; 9.30
- d) 0.020
- e) 26.6; 27.6
- f) 50.43; 50.23
- 11. a) 22.456, 22.466, 22.546
- b) 60.657, 60.756, 60.765
- c) 3.076, 3.67, 367
- d) 53.607, 53.670, 53.760
- 12. a) 77.740, 75.704, 75.240

- b) 4.001, 0.041, 0.040, 0.004

13. Teacher to check.

Samples:

1.321, 1.322, 1.323, 1.324, 1.325

- 14. 5, 50; 0.5, 0.50
- 15. 2, 20; 0.2, 0.20

- 16. a) 4, 40
- b) 6, 60
- c) 8, 80

17. Teacher to check shading.

25, 75; 0.25, 0.75

- 18. a) 0.51
- b) 0.85
- c) $\frac{3}{4}$

- 19. a) 0.34, $\frac{3}{5}$, 0.7

b) $\frac{77}{100}$, $\frac{4}{5}$, 0.817

c) 0.425, $\frac{1}{2}$, $\frac{3}{5}$

20. $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$
 $= 0.25 + 0.25 + 0.25$
 $= 0.75$

21. $\frac{1}{2} = 0.500 < 0.635$

AP Book NS7-39

page 141

- 1. a) 57
- b) 2.25
- c) 5.32
- 2. a) 7
- b) 3; 6
- c) 7; 4
- d) 1; 9
- 3. b) 7; 7
- c) 6; 1
- 4. b) 8; 10
- c) 6; 10
- d) 3; 10

- 5. b) 5; 17
- c) 3; 15
- d) 8; 11

6. a) $2.\underline{3} = \frac{23}{10}$

b) $4.\underline{5} = \frac{45}{10}$

c) $7.\underline{6} = \frac{76}{10}$

d) $3.5\underline{5} = \frac{355}{100}$

e) $6.1\underline{8} = \frac{618}{100}$

f) $9.7\underline{6} = \frac{976}{100}$

g) $1.2\underline{3} = \frac{123}{100}$

h) $1.25\underline{4} = \frac{1254}{1000}$

i) $5.35\underline{5} = \frac{5355}{1000}$

j) $3.11\underline{2} = \frac{3112}{1000}$

- 7. a) = 7.0
= 7.00
= 7.000
- b) = 15.0
= 15.00
= 15.000
- 8. a) 8; 80; 800; 8 000
- b) 16; 160; 1 600; 16 000
- 9. a) 17
- b) 52
- c) 134
- d) 753
- e) 1 340
- f) 7 530
- g) 1 036
- h) 125
- i) 10 360
- j) 1 250

AP Book NS7-40

page 143

- 1. a) 25; 50; 75
- b) 62; 33; 95
- 2. a) 2.35
- b) 2.79
- Teacher to check sketch.
- 3. a) 4; 7; 7
- b) 65; 22; 87; 87
- c) 56; 5; 61; 61
- d) 123; 440; 563; 563
- 4. a) 60; 87; 0.87
- b) 570; 1 335; 1.335
- c) 2 025; 99; 2 025; 990; 3 015; 3.015
- 5. b) 4 054; 293; 4 054; 2 930; 6 984; 6.984
- 6. a) 5; 7; 5.7
- b) 7; 6; 1; 3; 7; 1; 6; 3; 8; 9; 8.9
- 7. b) 67.73
- 8. a) 8; 8; 13; 13; 1; 3; 8.93
- b) 2; 8; 6; 15; 15; 1; 5; 2.875

9. a)

	0	7	2	3
	3	1	4	6
	0	5		
	3	13	6	9

Regroup:

	4	3	6	9
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b)

	0	2	3	
4	5	6	5	2
	2	4		
4	7	12	8	2

Regroup:

	4	8	2	8	2
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BONUS 0.907

Number Sense – AP Book 7, Part 1: Unit 5 (continued)

AP Book NS7-41

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- | | | |
|---|---|---|
| 0 | 3 | 2 |
| 0 | 5 | 4 |
| 0 | 8 | 6 |
 - | | | |
|---|---|---|
| 5 | 7 | 1 |
| 3 | 2 | 6 |
| 8 | 9 | 7 |
 - | | | | |
|---|---|---|---|
| 0 | 4 | 1 | 6 |
| 0 | 5 | 7 | 3 |
| 0 | 9 | 8 | 9 |
 - | | | | |
|---|---|---|---|
| 9 | 1 | 1 | 7 |
| 0 | 1 | 6 | 2 |
| 9 | 2 | 7 | 9 |
- | | | |
|---|---|---|
| 1 | | |
| 0 | 8 | 1 |
| 0 | 5 | 8 |
| 1 | 3 | 9 |
 - | | | |
|---|---|---|
| 1 | | |
| 2 | 5 | 6 |
| 7 | 2 | 7 |
| 9 | 8 | 3 |
 - | | | | |
|---|---|---|---|
| 1 | | | |
| 0 | 5 | 8 | 3 |
| 1 | 2 | 5 | 1 |
| 1 | 8 | 3 | 4 |
 - | | | | |
|---|---|---|---|
| 1 | 1 | | |
| 5 | 5 | 5 | 5 |
| 4 | 0 | 7 | 8 |
| 9 | 6 | 3 | 3 |
 - | | | |
|---|---|---|
| 1 | | |
| 0 | 4 | 5 |
| 0 | 0 | 8 |
| 0 | 3 | 2 |
| 0 | 8 | 5 |
 - | | | |
|---|---|---|
| 1 | | |
| 5 | 6 | |
| 1 | 4 | 2 |
| 0 | 8 | |
| 7 | 8 | 2 |

g)

1	1		
1	2	7	5
0	5	6	
6	3	0	4
8	1	3	9

h)

2	1		
0	9		
0	9	9	
0	9	9	9
2	8	8	9

- 7.09
 - 9.47
 - 12.585
 - 0.896
 - 14.697
 - 3.555
 - 67.373
- 8.65 g
 - Two quarters
- He didn't line up the decimals correctly (treated 5.65 like 56.5).

6. a)

0	5	3
0	2	1
0	3	2

b)

0	7	6
0	2	4
0	5	2

c)

3	4	7	
2	2	0	
1	2	7	

d)

6	4	9	
0	3	5	
6	1	4	

7. a)

7	11	
0	8	8
0	5	8
0	2	3

b)

6	12	
5	5	6
3	5	6
2	1	6

c)

5	11		
6	5	5	6
4	2	5	0
1	9	0	6

d)

3	16		
2	4	3	3
0	2	7	1
2	1	9	2

e)

14		
3	4	10
4	5	6
2	6	5
1	8	5

f)

10		
2	3	11
3	4	5
2	2	2
0	8	9

g)

13			
6	7	15	
8	9	10	5
6	6	8	0
0	7	7	5

h)

11	9		
4	5	6	17
7	8	9	7
1	2	3	8
3	9	6	9

- 0.844
 - 6.345
 - 2.14
 - 1.63
- 0.23 mm
 - 0.37 mm

AP Book NS7-42

page 147

- 87 523; up
 - 97 513; down
 - 275 323; down
 - 196 782; up
 - 300 527; up
- 100 123
100 000; rd
 - 986 451; ru
990 000
 - 27 321; ru
30 000
 - 2 159 327; ru
2 200 000
 - 3 857 206; ru
3 860 000
 - 6 678 952; ru
6 700 000
 - 2 301 325
2 301 300; rd
 - 3 297 876; ru
3 297 880
 - 1 238 591; ru
1 239 000
- 390 000
 - 988 000
 - 40 000
 - 427 300
 - 20 200
 - 8 700 000
 - 100 000
 - 4 000 000

AP Book NS7-43

page 148

- 2
 - 7
- 5
 - 8
- 3.8; 3.8
 - 4.25; 4.25
- 2.4
 - 3.14
 - 42.5
 - 99
 - 50
 - 1

Number Sense – AP Book 7, Part 1: Unit 5 (continued)

- g) 3.3
- h) 42.73
- i) 3.271
- j) 92.2
- k) 36.28
- l) 2
- m) 8
- n) 50
- o) 5.30
- 5. a) 123; 12; 1
- b) 679; 68; 7
- c) 633; 63; 6
- d) 177; 18; 2
- 6. a) 35.2
- b) 0.6
- c) 349.7
- d) 100.1
- e) 0.1
- f) 921.6
- g) 7.0
- h) 5.0
- 7. a) 1
- b) 0
- c) 1
- d) 1
- e) 0
- f) 1
- 8. a) 33
- b) 67
- c) 14
- d) 46
- 9. a) 33; 4; 37
- b) 25; 11; 14
- c) 3; 5; 15
- d) 35; 7; 42
- e) 1; 0; 1
- f) 4; 3; 12
- g) 24; 3; 8
- h) 74; 21; 53
- i) 40; 5; 8
- 10. a) i) not reasonable
- ii) reasonable
- iii) not reasonable
- iv) not reasonable
- v) reasonable
- vi) not reasonable

11. from 7.15 to 7.24
Teacher to check explanation.
Sample:
If the tenths place is rounded to 2, the number could either be rounded up or rounded down.
If rounded up, the tenths place would start as 1 and the hundredths place could be 5 or higher.
If rounded down, the tenths place would start as 2 and the hundredths place could be 4 or lower.

AP Book NS7-44 page 150

- 1. a) i) 2; 3; 20; 25
- ii) 12; 4; 8
- iii) 12; 10; 0; 22
- iv) 562; 140; 422
- b) i) 26.945; no
- ii) 7.378; no
- iii) 23.593; no
- iv) 421.779; yes
- 2. a) i) 0.8; 0.4; 0.4
- ii) 25.1; 0; 4.5; 29.6
- iii) 3.3; 2.7; 0.5; 6.5
- iv) 5.5; 2.8; 2.7
- 3. a) i) 9.1; 1.8; 10.9
- ii) 3.2; 2.5; 4.1; 9.8
- iii) 0.23; 0.14; 0.09
- iv) 680; 470; 210
- 4. a) Answers may vary – teacher to check.
- b) i) 13 934.29
- ii) 1 622.1
- iii) 69.6
- iv) 741.251
- 5. a) Q1: 9
- Q2: 10.2
- Q3: 10
- b) 10.153
- c) Q2

- Teacher to check initial estimates for questions below.
- 6. No
 - 7. 91.04 million km
 - 8. 18.43°C
 - 9. 7.9 cm
 - 10. 2.81 m
 - 11. a) 9.405 g
 - b) 10.805 g
 - c) 1.400 g
 - 12. Teacher to check.

AP Book NS7-45 page 152

- 1. b) 2
- c) 5
- 2. b) 6
- c) 14
- d) 8
- e) 24
- f) 35
- g) 145
- h) 112
- j) 27.5
- k) 976
- l) 523.6
- 3. a) 4
- b) 8
- c) 75
- 4. $0.4 + 0.4 + 0.4 + 0.4$
 $\quad\quad\quad 0.8 \quad 1.2 \quad 1.6$
 $+ 0.4 + 0.4 + 0.4 + 0.4$
 $\quad\quad\quad 2 \quad 2.4 \quad 2.8 \quad 3.2$
 $+ 0.4 + 0.4 = 4$
 $\quad\quad\quad 3.6 \quad 4 \nearrow$
- 5. $\$0.30 = \bullet\bullet\bullet$
so: $10 \times \$0.30$
 $= 10 \times \bullet\bullet\bullet$
 $= 10 \times 3 \times \bullet$
 $= 30 \times \bullet$
 $= \$3.00$

AP Book NS7-46 page 153

- 1. a) 3
- b) 100×0.02 ; 2

- 2. b) 350
- c) 720
- d) 630
- e) 210
- f) 600
- g) 34
- h) 76
- j) 7
- 3. b) 2
- c) 63
- d) 45
- e) 272
- f) 309
- g) 23
- h) 70
- i) 140
- j) 6
- k) 1 130
- l) 240
- 4. a) 1
- b) 1
- 5. It shifts 3 places right.
- 6. a) 930
- b) 726
- c) 6 325
- d) 270
- e) 3 210
- f) 2 800

AP Book NS7-47 page 154

- 1. b) $3.0 \div 10 = 0.3$
- c) 0.04
- d) $0.3 \div 10 = 0.03$
- e) $0.6 \div 10 = 0.06$
- f) 0.21
- g) $2.3 \div 10 = 0.23$
- 2. a) 1; right; 1; left
- b) 2; right; 2; left
- 3. b) 0.07
- c) 0.06
- d) 0.31
- e) 2.60
- f) 8.1
- g) 0.03
- h) 2.54

Number Sense – AP Book 7, Part 1: Unit 5 (continued)

- i) 0.060
- j) 0.091
- k) 0.005
- l) 0.913
- 4. 1 dollar = 100 pennies, each with a value of \$0.01
- 5. $2.5 \text{ m} \div 100 = 0.025 \text{ m}$
or
 $250 \text{ cm} \div 100 = 2.5 \text{ cm}$
- 6. $1.0 \div 10 = 0.1$
or
 $1.0 \div 0.1 = 10$

AP Book NS7-48 page 155

- 1. b) 3; right
c) 2; left
d) 1; left
e) divide; 3
f) divide; 1
g) multiply; 2
h) 7; left
i) 5; right
- 2. c) 3; right; 247 567
d) 2; left; 1.0045
e) 5; right; 60 200
f) 4; left; 0.002 468 2
- 3. a) right 3
b) right 2
c) right 1
d) right 3
e) right 4
f) left 1
g) left 2
h) left 3
i) left 4
j) left 3

AP Book NS7-49 page 156

- 1. a) 3.96
b) 4.8
c) 6.06
d) 9.6
e) 8.48
f) 15.5

- g) 8.42
- h) 28.77
- 2. b) 9, 12; 10, 2; 10.2
c) 16, 28; 18, 8; 18.8
d) 6 ones + 27 tenths = 8 ones + 7 tenths = 8.7
- 3. a) 9, 15, 3; 10, 5, 3; 10.53
b) 8, 12, 16; 9, 3, 6; 9.36
- 4. a) 9.68
b) 19.05
c) 43.26
d) 6.27
- 5. a) 18
b) 1.2
c) 25.2
d) 20.43
e) 242.2
f) 34.4
g) 10.8
h) 47.6
i) 41.86
j) 50.32
k) 140.76
l) 147
- 6. a) 84
b) 42
c) 290.4
d) 1500
e) 100

AP Book NS7-50 page 157

- 1. a) 0.8
b) 2.84
- 2. a) 1.5
b) $2.4 + 2.4$; 4.8
c) $1.6 + 1.6 + 1.6 + 1.6$; 6.4
- 3. b) 47, 5; 235; 2.35
c) 132, 3; 396; 0.396
d) 2, 44; 88; 8, 8; 8.8
e) 12; 48; 4, 8; 4.8
f) 306; 918; 9, 18; 9.18

- 4. a) 7, 3; 7, 3; 14, 6; 1.4, 0.06; 1.46
b) 6, 3; 6, 3; 18, 9; 0.18, 0.009; 0.189
- 5. a) 3, 3; 12, 1.05; 13.05
b) 6, 0.021; 6, 4; 0.021, 4; 24, 0.084; 24.084
- 6. a) 3.2
b) 10.5
c) 1.6
d) 11.6
e) 48.16
f) 0.094
g) 23.73

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- 1. 4; 0.23; 0.03
- 2. b) 4; 0.4
c) 54; 6; 0.06
d) 25; 5; 0.005
- 3. b) 4, 5; 40, 5; 8; 0.008
c) 4, 8; 40, 8; 5; 0.005
- 4. b) 3.2
c) 1.3
d) 2.1
e) 2.1
f) 20.31
g) 0.132
- 5. b) 1.0, 0.6; 1.6
c) 15.0, 0.6, 3; 15.0, 3, 0.6, 3; 5.0, 0.2; 5.2
- 6. a) 0.2
b) 0.6
c) 0.09
d) 0.131
e) 0.016
f) 0.14
g) 0.9
h) 1.4
i) 0.06
j) 9.3
k) 0.41
l) 5.1

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- 1. a) 4; 2
b) 3; 2
c) 6; 1
d) 2; 4

2. a)
$$\begin{array}{r} \overline{) 91} \\ \underline{- 5} \\ \end{array}$$

b)
$$\begin{array}{r} \overline{) 82} \\ \underline{- 6} \\ \end{array}$$

c)
$$\begin{array}{r} \overline{) 98} \\ \underline{- 8} \\ \end{array}$$

d)
$$\begin{array}{r} \overline{) 99} \\ \underline{- 5} \\ \end{array}$$

e)
$$\begin{array}{r} \overline{) 93} \\ \underline{- 9} \\ \end{array}$$

3. a)
$$\begin{array}{r} \overline{) 87} \\ \underline{- 7} \\ \end{array}$$

b)
$$\begin{array}{r} \overline{) 84} \\ \underline{- 6} \\ \end{array}$$

c)
$$\begin{array}{r} \overline{) 83} \\ \underline{- 8} \\ \end{array}$$

d)
$$\begin{array}{r} \overline{) 63} \\ \underline{- 4} \\ \end{array}$$

e)
$$\begin{array}{r} \overline{) 99} \\ \underline{- 6} \\ \end{array}$$

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f)
$$\begin{array}{r} 1 \\ 5 \overline{) 94} \\ - 5 \\ \hline 4 \end{array}$$

4. a)
$$\begin{array}{r} 1 \\ 5 \overline{) 85} \\ - 5 \\ \hline 3 5 \end{array}$$

b)
$$\begin{array}{r} 1 \\ 7 \overline{) 97} \\ - 7 \\ \hline 2 7 \end{array}$$

c)
$$\begin{array}{r} 2 \\ 8 \overline{) 92} \\ - 8 \\ \hline 1 2 \end{array}$$

d)
$$\begin{array}{r} 3 \\ 2 \overline{) 75} \\ - 6 \\ \hline 1 5 \end{array}$$

e)
$$\begin{array}{r} 3 \\ 2 \overline{) 73} \\ - 6 \\ \hline 1 3 \end{array}$$

5. a)
$$\begin{array}{r} 1 2 \\ 5 \overline{) 61} \\ - 5 \\ \hline 1 1 \end{array}$$

b)
$$\begin{array}{r} 1 1 \\ 4 \overline{) 47} \\ - 4 \\ \hline 0 7 \end{array}$$

c)
$$\begin{array}{r} 4 3 \\ 2 \overline{) 86} \\ - 8 \\ \hline 0 6 \end{array}$$

d)
$$\begin{array}{r} 2 1 \\ 3 \overline{) 63} \\ - 6 \\ \hline 0 3 \end{array}$$

e)
$$\begin{array}{r} 1 6 \\ 5 \overline{) 81} \\ - 5 \\ \hline 3 1 \end{array}$$

6. a) 13 R3
b) 13
c) 31 R2
d) 27 R1
e) 16
f) 12 R3

7. a)
$$\begin{array}{r} 1 6 2 \\ 5 \overline{) 812} \\ - 5 \\ \hline 3 1 \\ - 3 0 \\ \hline 0 1 2 \\ - 0 1 0 \\ \hline 0 0 2 \end{array}$$

b)
$$\begin{array}{r} 1 0 9 \\ 3 \overline{) 327} \\ - 3 \\ \hline 0 2 \\ - 0 0 \\ \hline 0 2 7 \\ - 0 2 7 \\ \hline 0 0 0 \end{array}$$

c)
$$\begin{array}{r} 1 2 1 \\ 6 \overline{) 731} \\ - 6 \\ \hline 1 3 \\ - 1 2 \\ \hline 0 1 1 \\ - 0 0 6 \\ \hline 0 0 5 \end{array}$$

d)
$$\begin{array}{r} 1 2 3 \\ 8 \overline{) 989} \\ - 8 \\ \hline 1 8 \\ - 1 6 \\ \hline 0 2 9 \\ - 0 2 4 \\ \hline 0 0 5 \end{array}$$

8. b)
$$\begin{array}{r} 0 6 5 \\ 5 \overline{) 327} \\ - 3 0 \\ \hline 0 2 7 \\ - 0 2 5 \\ \hline 0 0 2 \end{array}$$

c)
$$\begin{array}{r} 0 4 6 \\ 9 \overline{) 421} \\ - 3 6 \\ \hline 0 6 1 \\ - 0 5 4 \\ \hline 0 0 7 \end{array}$$

d)
$$\begin{array}{r} 0 4 9 \\ 7 \overline{) 345} \\ - 2 8 \\ \hline 0 6 5 \\ - 0 6 3 \\ \hline 0 0 2 \end{array}$$

9. c) 623; 6 hundreds
d) 321; 32 tens
e) 892; 8 hundreds
f) 240; 24 tens
g) 987; 9 hundreds
h) 412; 41 tens

10. a)
$$\begin{array}{r} 0 4 5 \\ 3 \overline{) 136} \\ - 1 2 \\ \hline 0 1 6 \\ - 0 1 5 \\ \hline 0 0 1 \end{array}$$

b)
$$\begin{array}{r} 0 6 5 \\ 4 \overline{) 263} \\ - 2 4 \\ \hline 0 2 3 \\ - 0 2 0 \\ \hline 0 0 3 \end{array}$$

c)
$$\begin{array}{r} 0 6 5 \\ 8 \overline{) 521} \\ - 4 8 \\ \hline 0 4 1 \\ - 0 4 0 \\ \hline 0 0 1 \end{array}$$

d)
$$\begin{array}{r} 0 6 7 \\ 6 \overline{) 405} \\ - 3 6 \\ \hline 0 4 5 \\ - 0 4 2 \\ \hline 0 0 3 \end{array}$$

e)
$$\begin{array}{r} 0 2 8 4 \\ 5 \overline{) 1423} \\ - 1 0 \\ \hline 0 4 2 \\ - 0 4 0 \\ \hline 0 0 2 3 \\ - 0 0 2 0 \\ \hline 0 0 0 3 \end{array}$$

f)
$$\begin{array}{r} 0 8 7 7 \\ 5 \overline{) 4385} \\ - 4 0 \\ \hline 0 3 8 \\ - 0 3 5 \\ \hline 0 0 3 5 \\ - 0 0 3 5 \\ \hline 0 0 0 0 \end{array}$$

g)
$$\begin{array}{r} 1 7 3 7 \\ 3 \overline{) 5213} \\ - 3 \\ \hline 2 2 \\ - 2 1 \\ \hline 0 1 1 \\ - 0 0 9 \\ \hline 0 0 2 3 \\ - 0 0 2 1 \\ \hline 0 0 0 2 \end{array}$$

h)
$$\begin{array}{r} 2 3 5 5 \\ 4 \overline{) 9421} \\ - 8 \\ \hline 1 4 \\ - 1 2 \\ \hline 0 2 2 \\ - 0 2 0 \\ \hline 0 0 2 1 \\ - 0 0 2 0 \\ \hline 0 0 0 1 \end{array}$$

i) 76

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- j) 501 R5
- k) 39
- l) 822 R3
- m) 3731 R1
- n) 2637 R2
- o) 372 R2
- p) 552 R4
- q) 2451 R3
- r) 496 R2

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1.

2.	.		
2	5	1	2
-	4		
	1		

2.	.		
2	5	1	2
-	4		
	1	1	

2.	.	5	
2	5	1	2
-	4		
	1	1	
-	1	0	
		1	

2.	.	5	
2	5	1	2
-	4		
	1	1	
-	1	0	
		1	2

2.	.	5	6
2	5	1	2
-	4		
	1	1	
-	1	0	
		1	2
-	1	2	
		1	2
		0	

2. a)

1	.	7	6
3	5	2	8
-	3		
	2	2	
-	2	1	
		1	8
-		1	8
		0	

b)

1	.	8	2
4	7	2	8
-	4		
	3	2	
-	3	2	
		0	8
-		0	8
		0	

c)

1	.	6	5
5	8	2	5
-	5		
	3	2	
-	3	0	
		2	5
-		2	5
		0	

d)

2	.	9	6
2	5	9	2
-	4		
	1	9	
-	1	8	
		1	2
-		1	2
		0	

- 3. a) 0.32
- b) 0.8
- c) 0.56
- d) 0.69
- e) 6.49
- 4. \$0.73
- 5. 1.04 m
- 6. 14.6 km
- 7. \$12.17
- 8. 8 pens for \$6.16

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- 1. Answers will vary.
Samples:
 - a) 3.55
 - b) 1.75
 - c) 12.67
 - d) 2.65
 - e) 5.33
 - f) 3.99
- 2. a) 5.72
- b) 10.7
- c) 28.759
- d) 0.7
- 3. a) 0.5706
- b) 5.670 or 5.706
- 4. a) +
- b) ×
- c) ÷
- 5. a) 6
- b) 3
- c) 6
- d) 21
- 6. a) 2.16 L
- b) 9 glasses
- 7. a) 16 kL
- b) 4 kL
- 8. a) Mars, Mercury
- b) 10.57 kg