

# 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

page 129

- 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

- 0.005; 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

page 133

- 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. b) 

		8	6	7	5
	2	5	0	9	3
6	7	0	0	5	
		4	9	0	7
- c) 

	2	5	0	9	3
6	7	0	0	5	
		4	9	0	7
- d) 

		8	6	7	5
	2	5	0	9	3
6	7	0	0	5	
		4	9	0	7
- e) 

		8	6	7	5
	2	5	0	9	3
6	7	0	0	5	
		4	9	0	7
5. b) one; thirty-two  
c) thirty-six; seven  
d) seven; fifty-two  
e) twenty;  
one hundred four
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) 1 250
- 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
--	---	---	---	---

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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1. a) 

0	3	2
0	5	4
0	8	6

  
 b) 

5	7	1
3	2	6
8	9	7

  
 c) 

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

  
 d) 

9	1	1	7
0	1	6	2
9	2	7	9
  
2. a) 

1		
0	8	1
0	5	8
0	3	9

  
 b) 

1		
2	5	6
7	2	7
9	8	3

  
 c) 

1			
0	5	8	3
1	2	5	1
1	8	3	4

  
 d) 

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

  
 e) 

1		
0	4	5
0	0	8
0	3	2
0	8	5

  
 f) 

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	

3. a) 7.09  
b) 9.47  
c) 12.585  
d) 0.896  
e) 14.697  
f) 3.555  
g) 67.373
4. a) 8.65 g  
b) Two quarters
5. 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	<del>8</del>	<del>8</del>
0	5	8
0	2	3

b) 

6 12		
5	<del>5</del>	<del>6</del>
3	5	6
2	1	6

c) 

5 11			
<del>6</del>	<del>8</del>	5	6
4	2	5	0
1	9	0	6

d) 

3 16			
2	<del>4</del>	<del>6</del>	3
0	2	7	1
2	1	9	2

e) 

14		
3	<del>4</del>	10
<del>4</del>	<del>5</del>	<del>6</del>
2	6	5
1	8	5

f) 

10		
2	<del>3</del>	11
<del>3</del>	<del>4</del>	<del>5</del>
2	2	2
0	8	9

g) 

13			
6	<del>7</del>	<del>8</del>	15
<del>8</del>	<del>9</del>	<del>10</del>	5
6	6	8	0
0	7	7	5

h) 

11 9			
4	<del>5</del>	<del>6</del>	17
<del>7</del>	<del>8</del>	<del>9</del>	7
3	2	3	8
2	9	6	9

8. a) 0.844  
b) 6.345  
c) 2.14  
d) 1.63
9. a) 0.23 mm  
b) 0.37 mm

## AP Book NS7-42

page 147

1. b) 87 523; up  
c) 97 513; down  
d) 275 323; down  
e) 196 782; up  
f) 300 527; up
2. a) 100 123  
100 000; rd  
b) 98 451; ru  
990 000  
c) 27 321; ru  
30 000  
d) 2 159 327; ru  
2 200 000  
e) 3 857 206; ru  
3 860 000  
f) 6 678 952; ru  
6 700 000  
g) 2 301 325  
2 301 300; rd  
h) 3 297 876; ru  
3 297 880  
i) 1 238 591; ru  
1 239 000
3. a) 390 000  
b) 988 000  
c) 40 000  
d) 427 300  
e) 20 200  
f) 8 700 000  
g) 100 000  
h) 4 000 000

## AP Book NS7-43

page 148

1. a) 2  
b) 7
2. a) 5  
b) 8
3. a) 3.8; 3.8  
b) 4.25; 4.25
4. a) 2.4  
b) 3.14  
c) 42.5  
d) 99  
e) 50  
f) 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)  $100 \times 0.02$ ; 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 the value of 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

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- 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

## AP Book NS7-51 page 158

- 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) 0.9  
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) 
$$\begin{array}{r} \phantom{5} \overline{) 91} \\ \underline{- 5} \phantom{0} \\ \phantom{0} \end{array}$$

b) 
$$\begin{array}{r} \phantom{3} \overline{) 82} \\ \underline{- 6} \phantom{0} \\ \phantom{0} \end{array}$$

c) 
$$\begin{array}{r} \phantom{4} \overline{) 98} \\ \underline{- 8} \phantom{0} \\ \phantom{0} \end{array}$$

d) 
$$\begin{array}{r} \phantom{5} \overline{) 99} \\ \underline{- 5} \phantom{0} \\ \phantom{0} \end{array}$$

e) 
$$\begin{array}{r} \phantom{9} \overline{) 93} \\ \underline{- 9} \phantom{0} \\ \phantom{0} \end{array}$$

3. a) 
$$\begin{array}{r} \phantom{7} \overline{) 87} \\ \underline{- 7} \phantom{0} \\ \phantom{0} \end{array}$$

b) 
$$\begin{array}{r} \phantom{3} \overline{) 84} \\ \underline{- 6} \phantom{0} \\ \phantom{0} \end{array}$$

c) 
$$\begin{array}{r} \phantom{2} \overline{) 83} \\ \underline{- 8} \phantom{0} \\ \phantom{0} \end{array}$$

d) 
$$\begin{array}{r} \phantom{4} \overline{) 63} \\ \underline{- 4} \phantom{0} \\ \phantom{0} \end{array}$$

e) 
$$\begin{array}{r} \phantom{6} \overline{) 99} \\ \underline{- 6} \phantom{0} \\ \phantom{0} \end{array}$$

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

f) 
$$\begin{array}{r} \phantom{0}1 \\ 5 \overline{) 94} \\ \underline{- 5} \\ \phantom{0}4 \end{array}$$

4. a) 
$$\begin{array}{r} \phantom{0}1 \\ 5 \overline{) 85} \\ \underline{- 5} \\ \phantom{0}35 \end{array}$$

b) 
$$\begin{array}{r} \phantom{0}1 \\ 7 \overline{) 97} \\ \underline{- 7} \\ \phantom{0}27 \end{array}$$

c) 
$$\begin{array}{r} \phantom{0}2 \\ 8 \overline{) 92} \\ \underline{- 8} \\ \phantom{0}12 \end{array}$$

d) 
$$\begin{array}{r} \phantom{0}3 \\ 2 \overline{) 75} \\ \underline{- 6} \\ \phantom{0}15 \end{array}$$

e) 
$$\begin{array}{r} \phantom{0}3 \\ 2 \overline{) 73} \\ \underline{- 6} \\ \phantom{0}13 \end{array}$$

5. a) 
$$\begin{array}{r} \phantom{0}12 \\ 5 \overline{) 61} \\ \underline{- 5} \\ \phantom{0}11 \end{array}$$

b) 
$$\begin{array}{r} \phantom{0}11 \\ 4 \overline{) 47} \\ \underline{- 4} \\ \phantom{0}07 \end{array}$$

c) 
$$\begin{array}{r} \phantom{0}43 \\ 2 \overline{) 86} \\ \underline{- 8} \\ \phantom{0}06 \end{array}$$

d) 
$$\begin{array}{r} \phantom{0}21 \\ 3 \overline{) 63} \\ \underline{- 6} \\ \phantom{0}03 \end{array}$$

e) 
$$\begin{array}{r} \phantom{0}16 \\ 5 \overline{) 81} \\ \underline{- 5} \\ \phantom{0}31 \end{array}$$

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

7. a) 
$$\begin{array}{r} \phantom{0}162 \\ 5 \overline{) 812} \\ \underline{- 5} \\ \phantom{0}31 \\ \underline{- 30} \\ \phantom{0}12 \\ \underline{- 10} \\ \phantom{0}2 \end{array}$$

b) 
$$\begin{array}{r} \phantom{0}109 \\ 3 \overline{) 327} \\ \underline{- 3} \\ \phantom{0}02 \\ \underline{- 00} \\ \phantom{0}27 \\ \underline{- 27} \\ \phantom{0}00 \end{array}$$

c) 
$$\begin{array}{r} \phantom{0}121 \\ 6 \overline{) 731} \\ \underline{- 6} \\ \phantom{0}13 \\ \underline{- 12} \\ \phantom{0}11 \\ \underline{- 11} \\ \phantom{0}06 \\ \underline{- 6} \\ \phantom{0}05 \end{array}$$

d) 
$$\begin{array}{r} \phantom{0}123 \\ 8 \overline{) 989} \\ \underline{- 8} \\ \phantom{0}18 \\ \underline{- 16} \\ \phantom{0}29 \\ \underline{- 24} \\ \phantom{0}5 \end{array}$$

8. b) 
$$\begin{array}{r} \phantom{0}065 \\ 5 \overline{) 327} \\ \underline{- 30} \\ \phantom{0}27 \\ \underline{- 25} \\ \phantom{0}2 \end{array}$$

c) 
$$\begin{array}{r} \phantom{0}046 \\ 9 \overline{) 421} \\ \underline{- 36} \\ \phantom{0}61 \\ \underline{- 54} \\ \phantom{0}7 \end{array}$$

d) 
$$\begin{array}{r} \phantom{0}049 \\ 7 \overline{) 345} \\ \underline{- 28} \\ \phantom{0}65 \\ \underline{- 63} \\ \phantom{0}2 \end{array}$$

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) 
$$\begin{array}{r} \phantom{0}045 \\ 3 \overline{) 136} \\ \underline{- 12} \\ \phantom{0}16 \\ \underline{- 15} \\ \phantom{0}1 \end{array}$$

b) 
$$\begin{array}{r} \phantom{0}065 \\ 4 \overline{) 263} \\ \underline{- 24} \\ \phantom{0}23 \\ \underline{- 20} \\ \phantom{0}3 \end{array}$$

c) 
$$\begin{array}{r} \phantom{0}065 \\ 8 \overline{) 521} \\ \underline{- 48} \\ \phantom{0}41 \\ \underline{- 40} \\ \phantom{0}1 \end{array}$$

d) 
$$\begin{array}{r} \phantom{0}067 \\ 6 \overline{) 405} \\ \underline{- 36} \\ \phantom{0}45 \\ \underline{- 42} \\ \phantom{0}3 \end{array}$$

e) 
$$\begin{array}{r} \phantom{0}0284 \\ 5 \overline{) 1423} \\ \underline{- 10} \\ \phantom{0}42 \\ \underline{- 40} \\ \phantom{0}23 \\ \underline{- 20} \\ \phantom{0}3 \end{array}$$

f) 
$$\begin{array}{r} \phantom{0}0877 \\ 5 \overline{) 4385} \\ \underline{- 40} \\ \phantom{0}38 \\ \underline{- 35} \\ \phantom{0}35 \\ \underline{- 35} \\ \phantom{0}0 \end{array}$$

g) 
$$\begin{array}{r} \phantom{0}1737 \\ 3 \overline{) 5213} \\ \underline{- 3} \\ \phantom{0}22 \\ \underline{- 21} \\ \phantom{0}11 \\ \underline{- 9} \\ \phantom{0}23 \\ \underline{- 21} \\ \phantom{0}2 \end{array}$$

h) 
$$\begin{array}{r} \phantom{0}2355 \\ 4 \overline{) 9421} \\ \underline{- 8} \\ \phantom{0}14 \\ \underline{- 12} \\ \phantom{0}22 \\ \underline{- 20} \\ \phantom{0}21 \\ \underline{- 20} \\ \phantom{0}1 \end{array}$$

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

- i) 76
- 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

## AP Book NS7-53

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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
					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

## AP Book NS7-54

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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 or 0.5760
- 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