

# Explore the Secrets of Math Level 4 Book1 Answers

## Page 1-2

(1)

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

## Page 1-3

(2)

145, 465, 0  
678, 234, 921  
301, 524, 691  
300, 400, 500  
476, 301, 779  
859, 709, 211

(3)

563, 742, 931  
722, 511, 171  
185, 281, 281  
999, 999, 999  
902, 902, 902  
808, 808, 808

## Page 1-4

(1)

1,000,000, 8,000,000, 3,000,000  
5,000,000, 3,000,000, 4,000,000  
0, 1,000,000, 1,000,000  
5,000,000, 4,000,000, 1,000,000

## Page 1-5

(1)

8,000,000, 70,000,000, 800,000,000  
1,000,000, 60,000,000, 900,000,000  
0, 50,000,000, 300,000,000

(2)

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

## Page 1-6

(3)

500,000,000, 10,000,000, 2,000,000  
400,000,000, 50,000,000, 6,000,000  
600,000,000, 50,000,000, 4,000,000  
300,000,000, 20,000,000, 1,000,000  
500,000,000, 40,000,000, 3,000,000  
400,000,000, 10,000,000, 0  
700,000,000, 50,000,000, 3,000,000  
300,000,000, 60,000,000, 2,000,000  
300,000,000, 20,000,000, 1,000,000  
0, 40,000,000, 2,000,000  
300,000,000, 70,000,000, 6,000,000  
300,000,000, 70,000,000, 2,000,000

700,000, 40,000, 0

300,000, 60,000, 7,000  
100,000, 50,000, 2,000  
200,000, 70,000, 0  
500,000, 60,000, 3,000  
100,000, 60,000, 9,000  
900,000, 50,000, 3,000  
600,000, 40,000, 8,000  
500,000, 70,000, 2,000  
300,000, 90,000, 1,000  
400,000, 80,000, 2,000

## Page 1-7

(1)

$500,000,000 + 10,000,000 +$   
 $2,000,000 + 700,000 + 40,000 + 600$   
 $+ 70 + 5$

Five hundred twelve million, seven  
hundred forty thousand, six hundred  
seventy-five

$400,000,000, + 50,000,000 +$   
 $6,000,000 + 300,000 + 60,000 +$   
 $7,000 + 900 + 8$

## Page 1-8

Four hundred fifty-six million, three  
hundred sixty-seven thousand, nine  
hundred eight

$600,000,000 + 50,000,000 +$   
 $4,000,000 + 100,000 + 50,000 +$   
 $2,000 + 600 + 70 + 4$

Six hundred fifty-four million, one  
hundred fifty-two thousand, six  
hundred seventy-four

(2)

$300,000,000 + 20,000,000 +$   
 $1,000,000 + 200,000 + 70,000 + 100$   
 $+ 60 + 3$

$700,000,000 + 41,000,000 +$   
 $1,000,000 + 900,000 + 50,000 +$   
 $2,000 + 300 + 40 + 5$

## Page 1-9

$300,000,000 + 20,000,000 +$   
 $1,000,000 + 500,000 + 70,000 +$   
 $2,000 + 900 + 70 + 2$

$600,000,00 + 60,000,000 + 7,000,000$   
 $+ 400,000 + 30,000 + 8,000 + 900 +$   
 $20 + 5$

(3)

5,000,000  
50,000,000  
500,000,000  
500,000,005  
500,000,050  
500,000,500  
505,000,505  
555,000,550  
555,000,555  
607,000,008  
900,000,000  
211,000,011  
330,000,003

## Page 1-10

100,000,001  
100,000,011

88,000,088  
722,683,144

Four hundred fifty-six million, seven  
hundred eighty-nine thousand

Seven hundred seventy-seven million,  
seven hundred seventy-seven  
thousand, seven hundred seventy-  
seven

One hundred eight million, one  
hundred one thousand, one hundred  
one

Four hundred million, eight hundred  
thirty-four thousand, four hundred  
thirty-eight

## Page 1-11

(1)

108, 101, 101  
400, 834, 438  
940, 126, 205  
391, 927, 0

## Page 1-12

(2)

123,456,789	210,987,654
945,267,983	532,779,052
345,784,209	678,926,434
572,000,754	800,000,000
368,958,693	105,373,947

(3)

888,450,921	472,293,450
555,444,333	0
399,692,450	691,472,485

## Page 1-14

(1)

$100,999,999 > 100,899,999 > 100,001,001$   
 $344,809,600 > 344,809,562 > 344,800,999$   
 $278,099,000 > 277,999,999 > 276,751,000$   
 $409,888,676 < 409,888,999 < 409,999,999$   
 $578,103,000 < 593,184,012 < 600,000,000$   
 $194,193,999 < 194,684,911 = 194,684,911$

## Page 1-16

901,286,160  
901,286,200  
901,286,000  
901,290,000  
901,300,000  
900,000,000  
900,000,000

109,670,100  
109,670,100  
109,670,000  
109,670,000  
109,700,000  
111,000,000  
110,000,000  
100,000,000

# Explore the Secrets of Math Level 4 Book1 Answers

Page 1-16  
 834,371,830  
 834,371,800  
 834,372,000  
 834,370,000  
 834,400,000  
 834,000,000  
 830,000,000

Page 1-18

Page 1-20  
 (1)  
 Sample: -, + -, -  
 -, + -, -  
 -, + -, -  
 -, + -, -  
 -, - +, -  
 +, + -, -  
 +, + -, +  
 -, - -, +  
 +, + -, -

(2)  
 7, 21, 9  
 13, 15, 5  
 27, 150, 150  
 280, 134, 400

(3)  
 + -  
 + -  
 + -

Page 1-21

(1)  
 $(2+4+6+8)=20$ ,  $(2+4+6+8)-(1+3+5+7)$   
 $(1+3+5+7)=16$ ,  $=2+4+6+8-1-3-5-7$   
 $20-16=4$ ,  $=2-1+4-3+6-5+8-7$   
 $=1+1+1+1$   
 $=4$

(2)  
 Use Method 1:  
 $(13+15+17+19+21)=85$   
 $(12+14+16+18+20)=80$   
 $85-80=5$

Use Method 2:  
 $(13+15+17+19+21)-(12+14+16+18+20)$   
 $=13+15+17+19+21-12-14-16-18-20$   
 $=13-12+15-14+17-16+19-18+21-20$   
 $=1+1+1+1+1=5$

Page 1-22

(3)  
 Use Method 1:  
 $(38+48+58+68+78)=290$   
 $(27+37+47+57+67)=235$   
 $290-235=55$

Use Method 2:  
 $(38+48+58+68+78)-(27+37+47+57+67)$   
 $=38+48+58+68+78-27-37-47-57-67$   
 $=38-27+48-37+58-47+68-57+78-67$   
 $=11+11+11+11+11=55$

(4)  
 Use Method 1:  
 $(137+157+177+197+217)=885$   
 $(127+147+167+187+207)+835$   
 $885-835=50$

Use Method 2:  
 $(137+157+177+197+217)-$   
 $(127+147+167+187+207)$   
 $=137+157+177+197+217-127-147-167-$   
 $187-207$   
 $=137-127+157-147+177-167+197$

$-187+217-207=10+10+10+10+10=50$

(5)  
 Use Method 1:  
 $(313+315+317+319+321)=1585$   
 $(212+214+216+218+220)=1080$   
 $=1585-1080=505$

Use Method 2:  
 $(313+315+317+319+321-$   
 $(212+214+216+218+220$   
 $=313+315+317+319+321-212-214$   
 $-216-218-220$   
 $=313-212+315-214+317-216+319$   
 $-218+321-220$   
 $=101+101+101+101+101=505$

(6)  
 Use Method 1:  
 $(5130+5150+5170+5190+5210)=25850$   
 $(5120+5140+5160+5180+5200)=25800$   
 $25850-25800=50$

Use Method 1:  
 $(5130+5150+5170+5190+5210$   
 $=25850$   
 $(5120+5140+5160+5180+5200)$   
 $=25800$   
 $25850-25800=50$

Use Method 2:  
 $(5130+5150+5170+5190+5210$   
 $-(5120+5140+5160+5180+5200$   
 $=5130+5150+5170+5190+5210$   
 $-5120-5140-5160-5180-5200$   
 $=5130-5120+5150-5140+5170$   
 $-5160+5190-5180+5210-5200$   
 $=10+10+10+10+10=50$

Page 1-24

(1)  
 1<sup>st</sup> way:  $(4+5)-(3+2)=9-5=4$   
 2<sup>nd</sup> way:  $(4+5)-(3+2)=4+5-3-2=4$

(2)  
 1<sup>st</sup> way:  $(7+6)-(5+3)=13-8=5$   
 2<sup>nd</sup> way:  $(7+6)-(5+3)=7+6-5-3=5$   
 Michael read 5 books in the first week.

(3)  
 $(126+146)-(124+144)=126+146-124-$   
 $144=126-124+146-144=2+2=4$

$233+4=237$  Michael read 237 books.

(4)  
 $(4+7)-(5+2)=11-7=4$   
 Oriana has 4 fish.

(5)  
 $(49+47)-(50+42)=96-92=4$   
 Oriana has 4 fish.

Page 1-25

(6)  
 $(10+13)-(8+4)=23-12=11$   
 $11+3=14$   
 Oriana has 14 flowers.

# Explore the Secrets of Math Level 4 Book1 Answers

	677,990	4
(7)	11,120	10
$(90+48)-(89+47)=90+48-89-47=2$	87,580	57
$56+2=58$	35,332	57
Oriana has 58 flowers.		45
	Page 1-29	2
(8)		12
Team 2	(1)	30
5	14, 5, 7	544
same	3, 14, 17	42
Team 4	0, 0, 63	0
9 points	1, 11, 33	600
	21, 23, 69	0
Page 1-27	24, 22, 35	
(10)	25, 8, 251	Page 1-36
Answers for left column:	2, 9, 0	983,829,986
Sample	0, 0, 31	477,828,657
	100, 36, 0	486,824,776
$5+95+995+9,995=(10-5)$	28, 51, 77	879,141,600
$+(100-5)+(1,000-5)+(10,000-5)$		16,545,562,324
$=10+100+1,000+10,000-5-5-5-5$	81, 20	300,374,667
$=11,090$	0, 20	734,836,548,683
	250, 338	358,389,000
$99,991+9,992+993+94=$	850, 0	123,456,789
$(100,000-9)+(10,000-8)+(1,000-7)+(100-6)$	312, 0	865,110,321
$=111,070$	0, 3,010	2,405,600
	(2)	11,111
$19,999+1,999+199=$	11, 5 x 4	22,222
$(20,000-1)+(2,000-1)+(200-1)$	12, 9 x 2	
$=22,197$	51, 16 x 6	Page 2-4
	18, 15 x 2	1, 2
$399,999+39,999+3,999+399=$	30, 20 x 2	1, 1
$(400,000-1)+(40,000-1)$	26, 24/3	4, 4
$+(4,000-1)+(400-1)$	22, 14/2	6, 16
$=444,396$	20, 8/4	
	18, 16/2	Page 2-5
$199,999+29,999+3,999+499=$	0, 48/2	(2)
$(200,000-1)+(30,000-1)$	0, 15 x 5, 75-20	4, 49
$+(4,000-1)+(500-1)$	51, 58x8, 464/4	4, 48
$=234,496$		10, 380
	0	22, 810
$199,998+29,997+3,996+495=$	550	11, 209
$(200,000-2)+(30,000-3)$	-1	36, 468
$+(4,000-4)+(500-5)$	-1	11, 11, 209
$=234,486$	3,010	36, 36, 468
		3, 2
$12+102+1,002+10,002=$	Page 1-31	3, 14
$(10+2)+(100+2)+(1,000+2)$	(1)	6, 11
$+(10,000+2)$	10, 20, 4, 12, 32	7, 5
$=11,118$	12, 24, 6, 18, 42	6, 6, 17
		6, 36, 19
$30,003+2,005+402+80=$	Page 1-32	8, 4, 5
$(30,000+3)+(2,000+5)$	(1)	8, 96
$+(400+2)+(100-20)$	12, 6, 15, 5, 11	9, 4
$=32,490$	42, 21, 18, 6, 27	8, 8, 14
		6, 48, 17
$60,101+3,101-101+11=$	Page 1-33	(3)
$(60,000+101)+(3,000+101)$	(1)	15, 4
$-(100+1)+(10+1)$	48	15, 16
$=63,112$	174	6, 10
	36	6, 20
	80	-, 338
Answers for right column:		20, 125
	Page 1-35	2, 106
11,102	49	4, 60
11,098	48	4, 7
111,086	4	21, 8
22,185	5	
443,985	42	
677,997	147	

# Explore the Secrets of Math Level 4 Book1 Answers

Page 2-6

(4)  
7, 3  
4, 2  
2, 5, 3  
8, 8  
7, 13  
4, 9  
32, 2/9  
42, 7

Page 2-7

(1)  
30  
384  
408  
438

Page 2-8

16  
16  
7  
163

Page 2-9

62  
108  
42  
32

Page 2-10

2,3, (4-3), (6-2)  
5,6, 2,3  
2,3,5, 3,4  
2,3,5,6 A,2  
2,A A,2  
A,B A,B  
2,3,A,B A,B  
2,(3+4) A,B  
2,(4-3) A,B  
(2+3),(4x5) C,B

Page 2-11

2,3 (4-3), (6-2)  
5,6 (A+2), 3  
2,3,5 (8-3), 4  
3,5,6 (10-A), 2  
2,A (10+A), 2  
B,3 (10+A), B  
A,B (15-A), B  
3,A,B A, (B+12)  
2,(3+4) A, (B-21)  
2,(4-3) A, (B-C)  
(2+3), (4+5) A,B,C,D

Page 2-12

(1)  
5,5  
3,3  
3,3,2,2  
2,2,5,5  
3,3,7,7

Page 2-13

2,6, 3,6, 9, 3, 9  
3, 2, 3  
  
4, 4, 9, 9  
2, 2, 3, 3

Page 2-13

2,6 3,6 9, 3,9  
3, 2, 3,

4, 4, 9, 9  
2, 2, 3, 3

(2)

2,3 3,5 2,2 2,3

1,2 2,2 1,5 2,5

1,3 3,3 1,7 2,7

2,6 3,6 5,9 3,9

2,3 2,3 3,3 3,3

Page 2-14

(3)

2  
3  
5  
2  
4  
5  
7  
3  
10  
9, 3  
4, 2  
6, 3  
7  
1  
1  
1  
1  
1  
1  
1

Page 2-16

(1)  
3  
8, 4, 2  
9, 3  
7  
2  
9, 3  
60, 12, 5, 4, 3  
8, 4, 2  
16, 8, 4, 2  
18, 9, 6, 3  
15, 5, 3  
12, 4, 3  
24, 6, 3, 2

(2)

20x4+20x5 20 is the common factor

25+31 1 is the common factor

Page 2-17

(1)

5, 3, 2, 5  
5, 3, 2, 25  
7, 6, 5, 7  
7, 6, 6, 84  
9, 2, 1, 9  
8, 3, 1, 32  
2, 7, 5, 4  
9, 7, 3, 90

8, 7, 5, 16  
4, 12, 3, 60  
6, 6, 3, 18

Page 2-19

(1)

4, 27  
5, 88  
9, 18  
7, 49  
2, 2  
4, 81  
4, 120  
4, 8  
6, 3, 48  
9, 7, 18  
15, 3, 105  
3, 72  
2, 120  
3, 6, 279  
5, 140  
17, 680  
3, 5, 2,480  
4, 81, 7,290

Page 2-20

10  
12  
0  
8  
11  
8  
9  
4  
68

Page 2-21

(1)

yes  
yes  
yes

(2)

58, 69  
89, 3, 3  
2, 2, 3, 5  
B, B  
D, C  
Q, A

Page 2-23

(1)

$(8x8)/(8x8)=1$   $(4+4)/(4+4)=1$   
 $(8/8)+(8/8)=2$   $(4x4)=(4x4)=1$   
 $(8+8+8)/8=3$   $(4/4)x(4/4)=1$

$(1+2+3-4)x5=10$   $(5+5)/5=2$   
 $1-2-3+4+5=10$   $(5)-(5/5)=4$   
 $(5-3)x4+2x1=10$   $5+(5/5)=6$   
 $1x2x3-4)x5=10$   $5x5-5=20$

(2)

sample  $(13-11+2)x6=24$   
 $(8-7)x6x4=24$   $(12x2)/(9-8)=24$   
 $3x7+(4-1)=24$   $7x4-(3+1)=24$   
 $3x7+(5-2)=24$   $(5+2-3)x6=24$   
 $3x8x(11-10)=24$   $9+9+5+1=24$

# Explore the Secrets of Math Level 4 Book1 Answers

Page 2-25

- (1)  
3,4,5,6,7
- (2)  
11,12,13,14,15
- (3)  
15,17,19,21,23
- (4)  
23,26,29,32,35
- (5)  
23,26,29,32,35
- (6)  
46,48,50,52,54

- (7)  
20,22,24,26,28

- (8)  
1,3,5,7,9

- (9)  
{14,15,16} {13,15,17} {12,15,18}  
{11,15,19}

- {10,15,20} {9,15,21} {8,15,22} {7,15,23}
- {6,15,24} {5,15,25} {4,15,26} {3,15,27}
- {2,15,28} {1,15,29} {0,15,30}

Page 2-26

- (1)  
30, 6, 19  
33, 15, 53
- (2)  
13, 15, 17, 19
- (3)  
17, 18, 19, 20, 21
- (4)  
No. Since  $230/6=38\text{ R}2$
- (5)  
14, 15, 16, 17, 18, 19, 20
- (6)  
No. Since  $39,098/10=3,909\text{ R}8$
- (7)  
291, 292, 293
- (8)  
98, 99, 100, 101, 102
- (9)  
4, 5, 6, 7, 8, 9, 10, 11, 12
- (10)  
1, 3, 5, 7, 9, 11, 13, 15

Page 2-28

- 4  
6  
15  
50  
300  
50

Page 2-29

- 320, 240  
320, 360  
151, 350  
400, 260  
360, 240  
395  
8,998  
2,083

Page 2-30

- 7,500 8,100  
12,400 3,600  
2,100 4,500  
31,108,000 1,434,720  
5,844  
5,847

Page 2-31

- (1)  
>  
<  
>  
<

Page 2-32

- (2)  
< >  
< >  
> =  
< <  
< <

(3)

- yes  
yes  
yes  
no  
no  
no  
no  
yes  
yes

Since  $A-B=(U-W)-(U-T)$   
 $=U-W-U+T$   
 $=T-W>0$

Page 2-33

- (2)F  
(3)F  
(4)S  
(5)F  
(6)  $245 \times 245$  is the greatest product.

Page 3-3

- $1/2$   $2/4$   $4/8$   $4/8$   $8/16$   
 $1/2$   $1/4$   $1/8$   $1/8$   $1/16$   
 $1/9$   $2/9$   $3/9$   $4/9$   $5/9$   $6/9$   $6/9$   $7/9$   
 $3/9$   $3/9$   $3/9$   $3/9$   $4/9$   $7/9$

Page 3-4

- 1,4  
3,7  
6,1  
5,9  
1,4  
2,5  
4,6  
7,9  
5,7  
7,7

Page 3-5

- $1/2$   $1/4$   $4/8$   $4/8$   $8/16$  equivalent  
 $1/2$   $1/4$   $1/8$   $1/8$   $1/16$  not equivalent  
 $1/3$   $1/3$   $3/9$   $3/9$   $3/9$   $3/9$  equivalent  
 $2/3$   $2/3$   $6/9$   $6/9$   $6/9$   $6/9$  equivalent

Page 3-6

- (1)  
yes yes  
yes yes

(2)

- 2,  $2/4$     2,  $4/6$     2,  $6/8$   
5,  $5/10$     7,  $14/21$     9,  $27/36$   
 $10/20$     15,  $30/45$     32,  $96/128$

(3)

- $8/16$   $32/108$      $1/12$   $1/15$   $1/18$   
 $18/36$   $108/108$      $1/18$   $5/54$   $1/96$

Page 3-7

- (1)  
yes    yes  
yes    yes

(2)

- $2, 1/2$      $2, 2/3$      $2, 3/4$   
 $5, 1/2$      $7, 2/3$      $3, 9/36$   
 $10, 1/2$      $15, 2/3$      $32, 3/4$

(3)

- 32,16,8    18,15,12  
106,36,18    96,54,18

(4)

- $1/2$   
 $2/4$   
 $3/6$   
 $4/8$   
yes  
yes

(5)

- $1/3$   
 $7/6$   
 $4/12$   
 $8/24$   
yes  
yes

# Explore the Secrets of Math Level 4 Book1 Answers

Page 3-8

(6)  
18,36,108,216,648,1296,3888,7776

(7)  
24/72, 12/36, 6/18, 1/3, 16/48, 5/15, 32/96,  
2/6

Page 3-9

(8)  
sample: yes  
yes  
no  
yes  
no

(9)  
Left column:

1/4, 6/24  
2/3, 6/9  
3/5, 15/25  
5/8, 15/24  
7/9, 21/27  
4/7, 16/28  
7/5, 14/10

Right column:

14/32, 7/16  
22/44, 7/16  
18/27, 6/9  
13/52, 1/4  
6/36, 1/6  
1/7, 3/21  
18/30, 3/5

Page 3-10

1/3  
13/19, 3/5, 1/2, 12/17, 10/17, 4/13, 1/9  
13/14, 11/18, 13/20, 17/16, 1/7, 21/43, 10/11  
5/8, 5/6, 12/13, 1/7

Page 3-12

(1)  
4/5, 1/2, 1/10  
1/2, 2/3, 3/40  
1/2, 1/2, 1/2  
3/5, 2/5, 1/2  
3/5, 1/3, 1/2  
1/2, 2/3, 1/8  
1/2, 1/4, 1/3

(2)  
wrong wrong  
wrong correct  
wrong, correct  
wrong, correct  
wrong, wrong

Page 3-13

(1)  
>, >, <, <  
<, <, <, <

Page 3-14

(3)  
<, <, 3/4  
<, <, 1/4, 1/2, 3/4  
<, <, 1/6, 3/6, 4/6, 5/6  
=, =, 1/5, 1/2

Page 3-14

(4)  
>, >, >, <, <  
=, <, >, <, >  
>, >, <, =, >  
>, <, >, >, <  
>, >, <, <, <

Page 3-15

(1)  
4/5, 4/5, 5/5  
3/5, 1/6, 3/7

(2)  
4/5, 1/6, 5/7  
4/8, 5/9, 1/4  
0, 1/3, 4/4  
7/8, 4/7, 3/9  
9/9, 5/7, 4/6  
4/5, 5/6, 2/7  
26/52, 2/24, 7/93  
2/31, 20/45, 43/63  
36/43, 50/73, 4/84  
64/67, 40/50, 37/51  
15/79, 50/75, 7/37  
222/245, 361/467, 641/739  
421/572, 510/600, 730/794

Page 3-16

(2)  
4/5, 1/6, 5/7  
4/8, 5/9, 1/4  
0, 1/3, 4/4  
7/8, 4/7, 3/9  
9/9, 5/7, 4/6  
4/5, 5/6, 2/7  
26/52, 2/24, 7/93  
2/31, 20/45, 43/63  
36/43, 50/73, 4/84  
64/67, 40/50, 37/51  
15/79, 50/75, 7/37  
222/245, 361/467, 641/739  
421/572, 510/600, 730/794

Page 3-17

(1)  
12/5 15/4  
5/6 5/4

(2)  
18/5 24/6 28/7  
30/8 30/9 27/4  
24/2 18/3 1/4  
210/80 342/76 175/97  
664/97 288/78 84/63  
42/51 48/63 18/79  
132/52 299/24 1836/93  
168/31 775/45 1134/63  
768/43 1875/73 1241/84  
1058/67 700/50 819/51  
2624/79 925/75 1100/37  
9476/242 5984/467 23,407/739  
7776/572 11,025/600 35,577/794

Page 3-19

1/6, 1/8  
1/12, 5/12  
12/40, 12/24

Page 3-20

(1)  
sample: 1/50, 1/31, 1/49, 1/73, 1/25

(2)  
sample: 1/50, 1/31, 1/49, 1/73  
1/33, 1/41, 1/59, 1/63  
4/5, 7/3, 9/5, 9/4  
74/56, 48/31, 26/11, 87/32  
4/5, 7/3, 9/5, 9/4

Page 3-22

(1)  
1/5x3/8 4/3x1/5 4/2x3/7 1/1x3/8 1/1x2/3  
1/7x1/4 1/1x2/4 1/5x1/2 1/3x1/1 1/1x1/1

(2)  
13 25  
1/6 3/7  
2/3 1/4  
4/9 1  
2/3 1/2  
1/7 2/9

(3)

1/1x3/4=3/4 1/1x1/1=1 3/1x3/8=9/8  
3/1x1/8=3/8 5/2x1/8=5/16 3/4x3/8=9/32  
3/2x1/8=3/16 3/1x1/7=3/7 3/2x1/8=3/10  
2/9 10/7 8/7  
1 36/35 5/14  
8/27 36/35 15/32  
3/8 1 5/14  
35/81 8/27 24/35  
3/10 5/18 20/27  
1/27 1/35 21/32  
1/2 7/160 7/26  
33/203 13/210 17/20

Page 3-24

(1)  
Four and two fifths, seven and three  
fourths

Five and two fifths, nine and six sevenths  
Three and five sixths, eight and one third  
Four and two thirds, six and four fifths

Page 3-25

Sample: 3 1/2  
4 1/2  
2 1/3  
2 2/3  
3 2/3  
4 1/4  
4 2/4  
4 3/4  
4 4/8  
3 2/8  
3 6/8  
4 4/8  
2 10/16  
3 5/8  
3 5/8  
3 3/8

# Explore the Secrets of Math Level 4 Book1 Answers

Page 3-26  
(2)  
sample:  $7/2$   
 $9/2$   
 $7/3$

Page 3-27  
 $6/3$   
 $8/3$   
 $17/4$   
 $18/4$   
 $19/4$   
 $36/8$   
 $26/8$   
 $37/8$   
 $34/8$   
 $30/8$   
 $36/8$   
 $42/16$   
 $28/8$   
 $27/8$   
 $27/8$   
 $29/8$

Page 3-28  
 $2.7, 6, 20$   
 $6, 54, 17, 341$   
 $5, 67, 28, 363$

Page 3-29  
 $34, 41, 13, 1407$   
 $25, 36, 21, 82$   
 $17, 33, 22, 583$   
 $23, 21, 12, 495$   
 $16, 54, 17, 881$   
 $24, 67, 28, 1636$   
 $42, 32, 27, 1371$   
 $63, 41, 20, 2603$

(2)  
 $17/5$       $9/7$   
 $32/5$       $44/6$   
 $39/5$       $45/8$   
 $11/6$       $40/9$   
 $67/8$       $29/8$   
 $23/3$       $19/2$   
 $34/9$       $7/6$   
 $35/8$       $17/6$   
 $40/7$       $60/7$   
 $34/5$       $50/5$   
 $31/4$       $24/6$

Page 3-30  
 $4 \frac{1}{4}$   
 $1 \frac{2}{9}$       $4$

Page 3-31  
 $4 \frac{1}{3}$       $2 \frac{1}{8}$   
 $2 \frac{5}{8}$       $5 \frac{3}{5}$   
 $2 \frac{3}{9} = 2 \frac{1}{3}$       $6 \frac{3}{4}$   
 $2 \frac{2}{5}$       $3 \frac{2}{6} = 3 \frac{1}{3}$

(2)  
 $2 \frac{3}{5}, 3 \frac{2}{4}, 16$   
 $2 \frac{2}{5}, 3 \frac{3}{7}, 3 \frac{5}{6}$   
 $1 \frac{2}{7}, 1 \frac{6}{7}, 9 \frac{4}{7}$   
 $2 \frac{3}{6} = 2 \frac{1}{2}, 1 \frac{1}{8}, 5 \frac{5}{8}$   
 $1 \frac{5}{8}, 6 \frac{7}{9}, 9 \frac{2}{9}$   
 $10 \frac{2}{3}, 5 \frac{1}{4}, 3 \frac{3}{8}$   
 $5 \frac{3}{7}, 5 \frac{3}{8}, 6 \frac{1}{5}$   
 $4 \frac{4}{9}, 8 \frac{1}{7}, 8 \frac{1}{6}$

Page 3-32  
Sample:  $9 \frac{1}{2}$   
 $5 \frac{1}{2}$   
 $7 \frac{1}{2}$   
 $5 \frac{1}{3}$   
 $7 \frac{1}{3}$

Page 3-33  
 $30 \frac{1}{3}, 7 \frac{1}{3}$   
 $100 \frac{1}{3}, 8 \frac{1}{3}$   
 $80 \frac{1}{2}, 4 \frac{1}{2}$   
 $100 \frac{1}{2}, 1 \frac{1}{2}$   
 $83 \frac{1}{4}, 6 \frac{1}{4}$   
 $2 \frac{5}{8}, \frac{\quad}{5} \frac{5}{8}$   
 $9 \frac{5}{7}, \frac{\quad}{5} \frac{5}{7}$   
 $2 \frac{12}{13}, \frac{\quad}{12} \frac{12}{13}$   
 $85 \frac{19}{43}, 5 \frac{19}{43}$   
 $12 \frac{11}{34}, 7 \frac{11}{34}$   
 $48 \frac{101}{133}, 6 \frac{101}{133}$   
 $200 \frac{333}{888}, 5 \frac{333}{888}$   
 $300 \frac{123}{567}, 9 \frac{123}{567}$

Page 3-34  
(1)  
 $1 \frac{1}{2}, 1 \frac{1}{2}$   
 $1 \frac{1}{2}, 1 \frac{1}{2}$   
 $1 \frac{1}{3}, 1 \frac{1}{3}$   
 $3 \frac{1}{3}, 3 \frac{1}{3}$

Page 3-35  
(2)  
 $4 \frac{1}{3}$   
 $1/3$   
 $20 \frac{1}{2}$   
 $10 \frac{1}{2}$   
 $21 \frac{1}{4}$   
 $74 \frac{5}{8}$   
 $13 \frac{5}{7}$   
 $9 \frac{12}{13}$   
 $7 \frac{19}{43}$   
 $32 \frac{11}{34}$   
 $19 \frac{101}{133}$   
 $38 \frac{333}{888}$   
 $69 \frac{123}{567}$

(3)  
 $4 \frac{1}{3}$   
 $1/3$   
 $26 \frac{1}{2}$   
 $9 \frac{1}{2}$   
 $47 \frac{1}{4}$   
 $25 \frac{5}{8}$   
 $69 \frac{5}{7}$   
 $25 \frac{12}{13}$   
 $50 \frac{19}{43}$   
 $45 \frac{11}{34}$   
 $42 \frac{101}{133}$   
 $15 \frac{333}{888}$   
 $21 \frac{123}{567}$

Page 3-37  
 $5 \frac{2}{3}$   
 $7 \frac{2}{3}$   
 $5 \frac{2}{4}, 5 \frac{1}{2}$   
 $7 \frac{2}{4}, 7 \frac{1}{2}$

(2)  
 $30 \frac{2}{3}, 3 \frac{4}{13}$   
 $100 \frac{2}{3}, 85 \frac{33}{43}$   
 $81, 12 \frac{16}{34}$

$101, 48 \frac{210}{333}$   
 $83 \frac{1}{2}, 200 \frac{510}{888}$   
 $3, 300 \frac{435}{567}$   
 $10 \frac{2}{7}, 249 \frac{136}{369}$

Page 3-38  
 $1/3, 1/3$

Page 3-39  
 $1 \frac{1}{3}, 1 \frac{1}{3}$   
 $1 \frac{1}{2}, 1 \frac{1}{2}$   
 $3 \frac{1}{2}, 3 \frac{1}{2}$

(2)  
 $48 \frac{1}{3}, 21 \frac{5}{43}$   
 $45 \frac{1}{3}, 19 \frac{6}{34}$   
 $10 \frac{1}{5}, 26 \frac{32}{333}$   
 $8 \frac{1}{3}, 31 \frac{156}{888}$   
 $42 \frac{1}{2}, 70 \frac{21}{567}$   
 $73 \frac{2}{8}, 73 \frac{1}{4}, 14 \frac{4}{56}, 14 \frac{1}{14}$   
 $47 \frac{1}{7}, 1 \frac{1}{234}$   
 $39 \frac{7}{13}, 1 \frac{1}{135}$

Page 3-41  
(2)  
 $3 \frac{3}{3}, 3 \frac{2}{2}, 3 \frac{4}{4}, 5 \frac{4}{4}$   
 $6=5 \frac{3}{3}, 2=1 \frac{8}{8}, 4=3 \frac{6}{6}, 6=5 \frac{4}{4}$

(3)  
 $3 \frac{5}{5}, 3 \frac{3}{3}, 5 \frac{7}{7}, 4 \frac{4}{4}$   
 $7 \frac{9}{9}, 6 \frac{8}{8}, 1 \frac{4}{4}, 6 \frac{6}{6}$   
 $6 \frac{7}{7}, 8 \frac{8}{8}, 3 \frac{2}{2}, 1 \frac{4}{4}$   
 $4 \frac{2}{2}, 5 \frac{4}{4}, 2 \frac{7}{7}, 6 \frac{9}{9}$

Page 3-43  
(2)  
 $12/3, 8/2, 16/4, 24/6$   
 $18/3, 16/8, 24/6, 24/4$   
(3)  
 $20/5, 12/3, 42/7, 20/4$   
 $72/9, 56/8, 8/4, 42/6$   
 $28/3, 72/8, 8/2, 8/4$   
 $10/2, 24/4, 21/7, 63/9$

Page 3-45  
(1)  
 $4 \frac{1}{2}, 4 \frac{1}{2}$   
 $1 \frac{1}{3}, 1 \frac{2}{3}$   
 $\frac{3}{4}, \frac{3}{4}$   
 $2 \frac{3}{4}, 2 \frac{3}{4}$

(2)  
 $3 \frac{2}{3}, 5 \frac{5}{8}, 1 \frac{56}{66}$   
 $5 \frac{4}{5}, 30 \frac{3}{7}, 1 \frac{37}{44}$   
 $2 \frac{6}{7}, 12 \frac{8}{13}, 3 \frac{17}{28}$   
 $5 \frac{1}{2}, 29/43, 6 \frac{72}{77}$   
 $1 \frac{6}{7}, 1 \frac{29}{34}, 5 \frac{73}{83}$

Page 3-46  
(3)  
 $7x5+2, 9x3+8$   
 $35+2, 27+8$   
 $37/5, 35/9$

$1x6-5, 6x7-5, 10x9-4$   
 $6-5, 42-5, 90-4$   
 $1/6, 37/7, 86/9$

$3x7+6, 10x8-5, 21x9+7$   
 $21+6, 80-5, 189+7$   
 $27/7, 75/10, 196/9$

# Explore the Secrets of Math Level 4 Book1 Answers

<p>Page 3-46 (4) 45/3=15, 90/5=18, 42/2=21 36/9=4, 4/4=1, 2</p> <p>Page 3-47 (1) 2/3 3/4 5/8 5/7</p> <p>(2) 5/6, 3/4 5/7, 5/8 3/7, 3/6 2/3, 3/2 3/8, 3/6 2/5, 4/9 1/2, 4/5 8/9, 5/6 2/7, 7/2</p> <p>Page 3-48 (1) 2/2, 10/12 12</p> <p>Page 3-49 2/2, 2/8, 5/5, 25/35 8, 35</p> <p>6/6, 30/48, 8/8, 40/56 48, 56</p> <p>(2) 9, 16, 24 15, 12, 36 42, 15, 72</p> <p>Page 3-50 (1) 3x2/4x2, 5/8, 6/8, 5/8, 11/8</p> <p>Page 3-51 1/6, 1x3/2x3, 1/6, 3/6, 4/6 2x2/5x2, 3/10, 4/10, 3/10, 7/10 4/9, 1x3/3x3, 4/9, 3/9, 7/9 3x2/4x2, 5/8, 6/8, 5/8, 11/8 5/6, 1x3/2x3, 5/6, 3/6, 8/6 1x2/5x2, 1/10, 2/10, 1/10, 3/10 7/9, 2x3/3x3, 7/9, 6/9, 13/9 4x2/11x2, 5/22, 8/22, 5/22, 13/22</p> <p>(2) 15/4, 4/9, 1/12 1/2, 7/6, 0 8/9, 0, 7/12 1/6, 4/3, 1/9 1/4, 7/8, 3/4</p> <p>Page 3-52 1/2, 40/9, 151/30 9/16, 225/72, 13/3 15/12, 10, 132/63 4/3, 84/5, 199/20 1/10, 5, 8-3=5 23/4, 4, 33/7 57/4, 12, 5/12 17/14, 5/6, 31/20 13/12, 13/5, 7/5 17/24, 7/8, 25/8 18 8/9, 225/7, 22/7 6-4=2, 17/7, 25/7 2 15/4, 17/12, 5/12</p>	<p>Page 4-2 2.2 33.3 444.4 6.66 8.18 9.099 17.17 11.11 66.066 12.012</p> <p>Page 4-3 4.1 52.7 872.3 6.92 13.11 12.015 18.15 67.87 92.038 100.101 200.202 600.606</p> <p>Page 4-4 (1) &gt;, &gt;, =, &lt;, &lt; &lt;,&gt;,&lt;,&lt;,&gt; =,=,=,=, &gt;,&gt;,&gt;,&gt;</p> <p>(2) 0.09999, 0.19999, 0.209, 0.21108, 0.3, 1 0.7008, 0.700999, 0.78, 7, 7.0001, 7.8 0.0407, 0.47, 4.0007, 4.0700, 40.7, 47</p> <p>0.002089, 0.20099, 0.2089, 2.089, 20.0089, 20.0809</p> <p>Page 4-5 302, 301.5, 301.55, 301.549 491, 491.3, 491.30, 491.300 673, 673.0, 673.00, 673.001 58, 57.9, 57.94, 57.936 70, 70.0, 70.00, 70.001 297, 296.9, 296.90, 296.905 5, 4.9, 4.90, 4.901 59, 58.7, 58.71, 58.710 348, 348.3, 348.29, 348.286 100, 100.0, 100.00, 100.000 100, 100.0, 100.00, 100.000 56, 55.9, 55.92, 53.918 782, 782.0, 782.05, 782.047 671, 671.4, 671.35, 671.352 10, 9.9, 9.89, 9.891 538, 538.1, 538.14, 538.148 316, 315.6, 315.57, 315.568 124, 124.0, 123.99, 123.988</p> <p>Page 4-6 13.6, 1.3, 9.9, 3.9 2.6, 1.3, 8.1, 2.9 10.61, 8.19, 72.31, 83.84 2.81, 8.01, 72.29, 78.84 1.193, 1.099, 0.514, 1.403 0.773, 0.489, 0.25, 0.279 32.11, 5566, 0.02, 0.09 2.2, 4.5, 67.4, 64.8 94.05, 8.936, 1, 40.1</p>	<p>Page 4-6 11.655, 16.308, 4.153 0.473, 10, 0.645 3,94277, 3.93932, 1.09244 2.35096, 0.00001, 0.70725 599.764, 498.97568</p> <p>Page 4-7 (1) 3.7+3.7+3.7+3.7=14.80 3.7x4=14.80 yes</p> <p>Page 4-8 (2) 6.00, 2, 6.00 1610, 3, 1610</p> <p>(3) 0.252, 1.638, 4.32, 5.67 0.736, 2.214, 12.96, 4.68 1.462, 2.628, 25.38, 23.67 2.43, 2.88, 41.76, 21.36 3.64, 2.97, 62.1, 20.6 5.092, 2.898, 20.59, 19.68 6.786, 2.664, 38.54, 19.32 2,492, 2.268, 59.15, 22.8</p> <p>Page 4-10 (1) 5,5 7,7 23,23 64,64</p> <p>(2) 10 10,000 1,000 10 10,000 1,000 100 100,000</p> <p>Page 4-11 (3) 600, 2,1,3 0.600 1610, 3,1,4 0.1610</p> <p>(4) 828 4 0.0828</p> <p>Page 4-12 1725, 1960 3, 3 1725 1960</p> <p>3196 6734 3 3 3.196 6.734</p> <p>3084, 16668 3, 3 3.084, 16.668</p>
--	---	---

# Explore the Secrets of Math Level 4 Book1 Answers

1808646, 5569798	Page 4-17	Page 4-26
5, 5	(1)	(3)
18,08646, 55.69798	1.69, 1.69, 1.63	0.18, 0.26, 0.12, 0.14, 0.04
	67, .067, 0.067	11.3, 22.6, 11.2, 21.4, 10.4
		1.8, 2.6, 1.2, 1.25, 1.04
896572, 5995392	(2)	113, 226, 112, 214, 104
6, 6	2.15, 1.15, 2.465, 1.03, 1.53	18, 26, 12, 14, 4
0.896572, 5.995392		
	Page 4-18	Page 4-27
Page 4-13	1.35, 3.216, 1.09, 1.66, 1.29	1230, 2150, 1150, 2465, 1030
(5)	0.62, 0.76, 0.23, 0.61, 0.34	2860, 21,500, 11,500, 24,650, 10,300
0.0252, 0.01638, 0.432	0.21, 0.43, 0.53, 0.32, 0.23	
0.7938, 59.15, 22.8	0.07, 0.06, 0.03, 0.032, 0.03	(4)
0.0736, 0.02214, 1.296		5.9, 69, 31.2
0.5382, 0.2492, 0.0268	Page 4-19	4.7, 2.52, 1.88
0.1462, 0.02628, 2.538	46.5, 31.5, 19.6, 16.5, 9.5	3.2, 10.7, 457.4
2.9193, 3.854, 2.1804	21.25, 25.6, 35, 2.5, 3.5	7.06, 4.01, 3.13
0.243, 0.0288, 4.176		908, 90.77, 90.5
2.1894, 0.6786, 0.02664	Page 4-21	309, 40.01, 644,22
0.364, 0.0297, 6.624	(1)	5.9, 23, 26
0.24308, 2.059, 2.0664	2, tenths	7.83, 28, 15
7.36, 33.84, 76.44	3, hundredths	0.03, 0.06, 0.9
7.429, 27.783, 26.208	4, thousandths	
0.7429, 2.7783, 2.6208	5, ten thousandths	Page 4-28
0.07429, 0.27783, 0.26208		(5)
74.29, 277.83, 262.08	(2)	5.10
25.6, 478, 3890	1,347, 3,215, 1.09, 1.66, 1.29	(6)
31.0482, 2.2698, 1.4742	0.131, 0.279, 0.251, 0.216, 0.061	12.78
2.8305, 3.0889, 3.4056		(7)
2.3488, 0.42024, 0.1701	(3)	386
	0.3471, 0.1787, 0.5344, 0.66, 0.41	(8)
	0.664, 0.0269, 0.0573, 0.1041, 0.0635	56250
Page 4-14		(9)
0.2853, 0.0318, 0.202	Page 4-23	60,000
0.0721, 0.00721, 0.000721	(1)	
0.561, 0.782, 0.000789	3000, 30000	Page 4-30
99.5029, 359.1505, 173.9815	4800, 76000	(1)
19.3683, 11.0943, 55.20992	4000, 1800	28.7
0.1344, 4.9952, 0.78474	3000, 56000	84.4
0.00345, 0.000832, 0.0005704		8.4
1.1592, 9.212, 18.0225	(2)	0.8
0.0098, 0.01272, 0.027664	20.00, 200.56	197
18.4576, 1.045296, 11.544	30.00, 21.43	19.7
	50.00, 13.09	1.97
(6)	17.06, 15.16	0.99
$0.45 \times 3 \times 7 = 9.45$	33.46, 5.03	98.5
(7)	27.69, 6.86	9.85
1640	7.397, 3.55	
(8)	26.56, 30.00	(2)
30		16.25, 1.56, 2.63, 4.17
144	Page 4-25	58.57, 457.14, 63.33, 3.83
378	(1)	0.06, 0.04, 0.08, 0.03
(9)	370, 30000	0.03, 0.05, 0.06, 0.05
26.95	480, 6700	0.52, 0.09, 0.72, 1.7
	340, 180	0.02, 0.01, 0.01, 0.01
Page 4-15	760, 5600	0.43, 0.34, 0.68, 0.88
(10)		5.25, 30.67, 14.83, 11.29
243.1	(2)	
(11)	2.133, 21.33	Page 4-31
10.24	3, 2.143	(3)
(12)	5, 1.309	5.39
31.05	1.706, 1.516	0.05
315.63	3.346, 0.503	1.32
4.5	2.769, 0.686	1.91
(13)	0.739, 0.342	0.166
7.8	2.656, 3	
(14)		Page 4-32
3270		(1)
(15)		3.33, 0.33, 2.83, 0.88
745.4072		0.03, 0.03, 0.03, 0.09
746.4392		11.11, 0.09, 0.14, 0.01

# Explore the Secrets of Math Level 4 Book1 Answers

Page 4-32

(2)  
0.2857214285714... 0.71428571428...  
0.428571428571... 0.857142857142...  
0.571428571428...

Page 4-33

(1)  
2,4  
1,10  
3.5, 0  
5, 154  
0, 0  
0, 1  
1,2  
9, 1.1  
45, 8.1  
1, 2  
2.175, 3.9  
15.735, 10.45  
0, 20.89  
10.37, 73.264  
1,006.5, 1,794.9  
399.06, 907.02  
61.96, 86.9399  
83, 102.35

Page 4-34

7.5, 76.5  
630, 365.80  
3,929.885, 11,001  
664,229, 6,798.297  
0, 16.8155  
180.76, 55.782  
384.3073, 40.360

(2)

2  
2.5  
3  
3.5  
4.5  
5  
5.5

Page 4-35

(3)  
1.38  
1.52  
3.42  
1.83  
2.01  
1.57  
1.32

(4)

6.08  
6.35  
6.64

Page 4-36

(5)  
1,000  
(6)  
6.5  
(7)  
7  
(8)  
15.7  
(9)  
72.25

Page 5-3

Answers for column on left:  
Line CD, CD (line w/arrows out)  
Ray EF, EF (arrow pointing right)  
Ray GH, GH (arrow pointing right)  
Line segment UV, UV (arrows out)  
Line segment XY, XY (arrows out)  
Point P, P

Answers for column on right:

A B(line w/two dots), AB(w/line on top)  
C D, CD  
U V, UV  
X Y, XY  
S W, SW  
S T, ST

Page 5-4

(1)  $\overline{GA}$ ,  $\overline{AJ}$ ,  $\overline{JM}$ ,  $\overline{GM}$ =824 feet. No line segments have the same length

(2)

$\overline{AB}$   $\overline{BC}$   $\overline{CD}$   $\overline{DE}$

$\overline{AC}$   $\overline{BD}$   $\overline{CE}$

$\overline{AD}$   $\overline{BE}$

$\overline{AE}$

There are 10 line segments.  $\overline{BC} = \overline{DE}$ ,

$\overline{BD} = \overline{CE}$ ,  $\overline{AE} = 647$  feet

Page 5-5

You need 6 different numbers

Page 5-7

(1)  
6  
(2)  
12

Page 5-8

$\overline{AB}=\overline{CD}$ ,  $\overline{AC}=\overline{BC}$ ,  $\overline{BD}=\overline{AC}$ ,  $\overline{BC}=\overline{AD}$ ,  $\overline{CD}=\overline{AB}$

$\overline{AB}$

(2) lines: DE, EF, DF, BE, EH, BH

$\overline{AD}$ ,  $\overline{DG}$ ,  $\overline{AG}$ ,  $\overline{BE}$ ,  $\overline{EH}$ ,  $\overline{BH}$ ,  $\overline{CF}$ ,  $\overline{FI}$ ,  $\overline{CI}$

Line segments: AB, BC, AC, DE, EF, DF, GH, HI, GI

2CM Group, AB, BC, GH, HI, DE, EF

1.5CM Group, AD, DG, BE, EH, CF, FI

3CM Group, AG, BH, CI

4 CM Group, AC, DG, GI

Page 5-9

(2)  
Intersecting line segments: AE,EF  
AE,AB AE,AC AE,EG EF,BF EF,EG  
EF,FH BF,AB BF,BD BF,FH AB,AC  
AB,BD AC,CG AC,CD EG,CG  
FH,GH EG,GH FH,DH BD,DH BD,CD  
CG,GH CG,CD GH,DH DH,CD

Page 5-10

(1)  
perpendicular lines: AB/AD, AB/BE,  
AB/CF, DE/AD, DE/BE, DE/CF

(2)

perpendicular line segments:  
AB,CD,QS,RT,ML,MK,MH,MG,MF,ME,  
LK,LH,LG,LF,LE,KH,KG,KF,KE,HG,  
HF,HE,GF,GE,

AP, PM, AM, QR, ST, BC, CK, BK,  
NL, LO, NO, DE, IG, GJ, IJ

Page 5-11

(1)  
parallel lines: AB,DE BC,EF AC,DF  
AD,BE,CF

(2)

d  
d  
d  
c  
c  
b

Page 5-12

(5)  
Line segments:  
AE,AB,AC,BF,BD,CD,CG,DH,EF,EG,FH  
GH

Congruent line segments:

AE=AB=AC=BF=BD=CD=CG=PH=EF=  
EG=GH=GH

Parallel line segments: AB, CD, GH, EF,  
AC, BD, EG, FH, AE, BJ, CG, DH

Perpendicular line segments:

(AC,BD,FH,EG) (AB,CD,GH,EF)  
(AC,BD,FH,EG) (AE,BF,CG,DH)  
(AB,CD,GH,EF) (AE,BF,CG,DH)

Page 5-13

(1)  
ACB, XZY, LPRQ, LLMN, LVVW  
BCA, LYZX, LQRP, LNML, LWUV  
C, LZ, LR, LM, LV

Vertex: Point C, is vertex, is vertex, is  
vertex, is vertex

(2)

no  
no  
no  
yes, AED,DEB,BEC,CEA

# Explore the Secrets of Math Level 4 Book1 Answers

Page 5-14

A,b,c,d

B,d,c,a

Page 5-15

ABC is a, ABC is a, ABC is a

Right angle, obtuse angle, straight angle

(2) an acute angle

a right angle

an obtuse angle

a straight angle

Page 5-16

(2)

45 degrees, 90 dgrs. 120 dgrs, 30 dgrs.

Page 5-17

(1)

AOB, AOB, AOB

BOC, BOC, BOC

COD, COD

(2)

B.  $90+30=120$

C.  $75+60=135$

D.  $75+75=150$

(3)

20, 150

70, 80

120, 30

170, 20

50, 150, 100, 120

50, 50, 80

Acute,BOF,obtuse,BOD,obtuse

Acute,COD,acute,EOF,acute

Obtuse,COE,acute,BOE,obtuse

Obtuse,COF,obtuse,BOC,acute

Obtuse,DOE,acute,DOF,acute

Page 5-19

(4)

100, 35

35, 140

45, 105

(5)

100

60

165

75

Page 5-21

(2) 6

(3) 36

(4) 28

(5) 55

(6)

AOB, AOB, AOB

AOC,AOC,AOC

BOC,AOD,AOD

BOC,BOC

BOD,BOD

COD,COD

Page 5-23

6

5

4

3

2

1

21

42

Page 5-24

(3)

right triangle, acute, obtuse,

acute,right

right triangle,

acute,obtuse,acute,right

Page 5-25

(3)

scalene, equilateral, scalene,

scalene, isosceles

scalene, equilateral, scalene,

scalene, isosceles

Page 5-26

Sample:  $x=50$ ,  $x=50$ ,  $x=25$ ,  $x=55$ ,

$x=20$

Sample:  $x=50$ ,  $x=50$ ,  $x=25$ , 55, 20

$X=90$ ,  $x=60$ ,  $x=45$ ,  $x=75$ ,  $x=45$

Page 5-27

(2)

d,c,d

d,d,c

Page 5-28

A diameter, radius, chord, 2,1

Page 5-29

(2)

yes

d, b&d, d, d

(3)

yes

page 5-31

(1)

$(8 \times 6) \times 1/2 = 48 = 35$

$= 24 = 48 = 35$

(2)

$BC=4$ ,  $h=3$ ,  $S^{\Delta}ABC=1/2(3 \times 4)$

$= 6$

Page 5-33

(1)

$4 \times 5 \times 1/2 = 10$

$4 \times 5 \times 1/2 = 10$

(2)

$5 + 3 + 1/2 = 15/2$

$3 \times 5 \times 1/2 = 15/2$

$3 \times 5 \times 1/2 = 15/2$