

Quantitative Reasoning Book 5

Answer key

Exercise 1: Page 5-7

- | | |
|---------|---------|
| 1. 872 | 2. 4931 |
| 3. 1379 | 4. 3248 |
| 5. 4444 | 6. 292 |
| 7. 334 | 8. 574 |

Exercise 2: Page 6

1. 16, 18, 20
2. 15, 17, 19
3. 29, 37, 46
4. 35, 40, 45
5. 98, 95, 99
6. 237, 235, 233
7. 121, 125, 129
8. 131, 136, 142
9. 189, 184, 178
10. 128, 256, 512
11. 729, 2187, 6561
12. 65536
13. $2, 2^{1/4}, 2^{1/2}$
14. $3, 3^{1/2}, 4$

Exercise 3: Page 7-8

A

- | | |
|----------------------|------------------|
| 1. YZT | 2. TT |
| 3. XT | 4. $2X4X8$ |
| 5. $\frac{WxY}{X+Y}$ | 6. $W+X=SS$ |
| 7. $Y+V+T = (SU)$ | 8. $Z+X-V+X=(V)$ |
| 9. TS | 10. $V+S-V=(Z)$ |

B

- | | |
|--------|-----------|
| 1. 348 | 2. 99 |
| 3. 12 | 4. 56 |
| 5. 3 | 6. 142 |
| 7. 25 | 8. 12 |
| 9. 48 | 10. $6/5$ |

C

- | | |
|------|-------------|
| 1. d | 2. c |
| 3. a | 4. a |
| 5. c | 6. d |
| 7. a | 8. 93890456 |

Exercise 4: page 9-10

- | | |
|-----------|----------|
| 1. XXXI | 2. XXI |
| 3. XXV | 4. LXXII |
| 5. LX | 6. IV |
| 7. VIII | 8. XI |
| 9. XXVIII | 10. XIII |
| 11. LXVI | 12. LXII |
| 13. XLVI | 14. LVII |
| 15. XLI | 16. L |

Exercise 5: page 11-16

A

- | | |
|-------|-------|
| 1. b | 2. a |
| 3. b | 4. c |
| 5. c | 6. d |
| 7. b | 8. a |
| 9. a | 10. b |
| 11. c | 12. d |
| 13. c | 14. c |
| 15. c | |

B

- | | |
|-------------|-------------|
| 1. 4800 | 2. 99 |
| 3. 233 | 4. 111 |
| 5. 193 | 6. 141,561 |
| 7. 51900 | 8. 193 |
| 9. 124,468 | 10. 121 |
| 11. 998 | 12. 247,500 |
| 13. 636,097 | 14. 401 |
| 15. 763 | 16. 449 |

Exercise 6: page 17-20

A

- | | |
|------|-------|
| 1. b | 2. a |
| 3. c | 4. c |
| 5. c | 6. c |
| 7. a | 8. b |
| 9. d | 10. c |

B

- | | |
|--------|-------|
| 1. b | 2. b |
| 3. 135 | 4. b |
| 5. c | 6. b |
| 7. d | 8. a |
| 9. a | 10. c |
| 11. b | 12. a |
| 13. c | 14. a |

Exercise 7: page 21-22

- | | |
|--|---|
| 1. 5 th Class | 2. 1 st Class |
| 3. 1 st and 7 th | 4. 4 th and 6 th |
| 5. Five | 6. No. |
| 7. Five | 8. No |
| 9. 190 | 10. 2 nd , 5 th , 7 th |

Exercise 8: page 23-24

- | | |
|-------|---------|
| 1. c | 2. 2250 |
| 3. c | 4. d |
| 5. b | 6. c |
| 7. c | 8. d |
| 9. d | 10. b |
| 11. c | 12. a |
| 13. b | 14. d |

Exercise 9: page 25-29**A**

- | | |
|--------|--------|
| 1. 27 | 2. 42 |
| 3. 66 | 4. 5 |
| 5. 63 | 6. 5 |
| 7. 10 | 8. 8 |
| 9. 0 | 10. 48 |
| 11. 60 | 12. 2 |

B

- | | |
|-------|--------|
| 1. 45 | 2. 12 |
| 3. 35 | 4. 13 |
| 5. 8 | 6. 100 |
| 7. 9 | 8. 0 |
| 9. 10 | |

Exercise 10: page 30-31

- | | |
|---------|---------|
| 1. 1234 | 2. cgi |
| 3. fhi | 4. 6145 |
| 5. afe | 6. djej |
| 7. dc | 8. ee |

- | | |
|-------------------|-----------|
| 9. gd | 10. da |
| 11. abdh | 12. bej |
| 13. bjji | 14. iaehj |
| 15. eeffii | 16. aeg |
| 17. g, ae, bb, be | 18. bjdb |
| 19. j | 20. de |

Exercise 11: page 32-33

- | | |
|-------|-------|
| 1. c | 2. d |
| 3. c | 4. a |
| 5. b | 6. c |
| 7. a | 8. d |
| 9. c | 10. b |
| 11. c | 12. b |
| 13. a | 14. d |
| 15. b | 16. a |

Exercise 12: page 34-39**A**

- | | |
|-------|-------|
| 1. 4 | 2. 7 |
| 3. 12 | 4. 19 |
| 5. 19 | 6. 11 |

B

- | | |
|-------|--------|
| 1. 8 | 2. 16 |
| 3. 25 | 4. 13 |
| 5. 2 | 6. 9 |
| 7. 1 | 8. 8 |
| 9. 4 | 10. 25 |

C

- | | |
|--------------------|--------------------|
| 1. 1, 3, 8 | 2. 4, 5 |
| 3. 5, 6, 7 | 4. 1, 2, 3, 8, 9 |
| 5. 3, 8 | 6. 6, 7 |
| 7. 24 | 8. $8+3+1+6+7$ |
| 9. 1, 6, 7 | 10. $1+2+5+6+7=21$ |
| 11. 8×3 | 12. 2, 8, 6 |
| 13. 5, 7 | 14. $2+4+6+8+20$ |
| 15. $1+3+5+7+9=25$ | 16. $25-20=5$ |

D

- | | |
|-------------------------|------------|
| 1. 2,5,6,7 | 2. 1,2,3,6 |
| 3. 3,4,6,7 | 4. 5,7,4 |
| 5. 5, 1, 4 respectively | |
| 6. 1, 4 respectively | |
| 7. 1,3,4 | |
| 8. 7 | |

E

- | | |
|-------|-------|
| 1. 18 | 2. 10 |
| 3. 21 | 4. 18 |
| 5. 39 | 6. 25 |
| 7. 4 | 8. 17 |
| 9. 22 | 10. 9 |

Exercise 13: page 40-41

- | | |
|--------------------------------------|---------|
| 1. 9 | 2. 0 |
| 3. 4 | 4. 9 |
| 5. 4 | 6. 15 |
| 7. 20 V | 8. V 11 |
| 9. 0 | |
| 10. $V \propto 1/12$ (Make equation) | |
| 11. $\frac{1}{4}$ (Make equation) | |
| 12. $\Lambda 1$ | |

Exercise 14: page 42

- | | |
|-------|---------------------|
| 1. 4 | 2. $3 \frac{2}{6}$ |
| 3. 33 | 4. 10 |
| 5. 46 | 6. $24 \frac{1}{7}$ |
| 7. 2 | 8. 5 |
| 9. 0 | 10. 7 |

Exercise 15: page 43

1. 28
2. 24
3. $24 \frac{1}{2}$ (Make equation)
4. 16
5. $17 \frac{1}{2}$ (Make equation)
6. 36
7. 22
8. $9 \frac{1}{3}$ (Make equation)
9. $18 \frac{2}{3}$ (Make equation)
10. $38 \frac{1}{2}$ (Make equation)

Exercise 16: page 44

- | | |
|----------|--------|
| 1. 16 | 2. 9 |
| 3. 51 | 4. ●● |
| 5. ●●● | 6. 15 |
| 7. ●●●●● | 8. ●●● |
| 9. 7 | 10. 75 |

Exercise 17: page 45-47

- | | |
|-------|-------|
| 1. 17 | 2. 61 |
| 3. 9 | 4. 78 |

- | | |
|---------|--------|
| 5. 3 | 6. 13 |
| 7. 13 | 8. 17 |
| 9. 0 | 10. 10 |
| 11. 5 | 12. 70 |
| 13. 120 | 14. 10 |
| 15. 270 | 16. 45 |

Exercise 18: page 48-50

- | | |
|-------|-------|
| 1. d | 2. b |
| 3. b | 4. c |
| 5. d | 6. a |
| 7. 13 | 8. 12 |
| 9. a | 10. c |
| 11. a | 12. c |
| 13. b | 14. a |
| 15. b | 16. d |

Exercise 19: page 51

- | | |
|--------|--------|
| 1. 7 | 2. 1 |
| 3. 4 | 4. 7 |
| 5. 7 | 6. 10 |
| 7. 8 | 8. 10 |
| 9. 12 | 10. 10 |
| 11. 12 | 12. 8 |
| 13. 1 | 14. 9 |
| 15. 12 | |

Exercise 20: page 53-54

- | | |
|-----------------------|----------------------|
| 1. $\frac{6}{7}$ | 2. $\frac{3}{5}$ |
| 3. 2:3, $\frac{2}{3}$ | 4. 5:7 $\frac{5}{7}$ |
| 5. $\frac{1}{9}$ | 6. $\frac{8}{9}$ |
| 7. $\frac{9}{11}$ | 8. 9:13 |
| 9. 3:7 | 10. 14:19 |
| 11. 21:23 | 12. $\frac{17}{24}$ |
| 13. $\frac{21}{31}$ | 14. $\frac{9}{17}$ |
| 15. $\frac{11}{29}$ | |

Exercise 21: page 55-56

- | | |
|---------|---------|
| 1. 16 | 2. 9 |
| 3. 161 | 4. 60 |
| 5. 0 | 5. 225 |
| 6. 10 | 7. 12 |
| 8. 132 | 9. 18 |
| 10. 13 | 11. 276 |
| 12. 100 | 13. 169 |
| 14. 10 | |

Exercise 22: page 57-60**A**

- | | |
|-------|-------|
| 1. c | 2. a |
| 3. d | 4. c |
| 5. a | 6. a |
| 7. c | 8. d |
| 9. b | 10. b |
| 11. c | 12. d |
| 13. c | 14. d |

B

- | | |
|--------|--------------|
| 1. 28 | 2. 8 |
| 3. 1 | 4. 12 |
| 5. 13 | 6. 8 |
| 7. 5,5 | 8. incorrect |
| 9. 4 | 10. 17 |
| 11. 9 | 12. 0 |
| 13. 13 | 14. 3 |
| 15. 14 | 16. 30 |

Exercise 23: page 61-63

- | | |
|--------|--------|
| 1. 4 | 2. 9 |
| 3. 11 | 4. 10 |
| 5. 10 | 6. 100 |
| 7. 61 | 8. 8 |
| 9. 15 | 10. 12 |
| 11. 12 | 12. 4 |
| 13. 17 | 14. 60 |
| 15. 0 | 16. 16 |

Exercise 24: page 64-68**A**

- | | |
|--------|---------|
| 1. 65 | 2. 33 |
| 3. 97 | 4. 32 |
| 5. 114 | 6. 142 |
| 7. 146 | 8. 485 |
| 9. 13 | 10. 50 |
| 11. 35 | 12. 407 |
| 13. 0 | 14. 32 |

B

- | | |
|------------------|------------------|
| 1. 3 | 2. 36 |
| 3. 8 | 4. 10 |
| 5. 15 | 6. 55 |
| 7. 10 | 8. $\frac{1}{3}$ |
| 9. $\frac{1}{5}$ | 10. 10 |

- | | |
|---------|---------|
| 11. 12 | 12. 210 |
| 13. 171 | 14. 90 |

C

- | | |
|--------|--------|
| 1. 8 | 2. 5 |
| 3. 8 | 4. 16 |
| 5. 76 | 6. 82 |
| 7. 16 | 8. 25 |
| 9. 7 | 10. 19 |
| 11. 25 | 12. 16 |
| 13. 88 | 14. 44 |
| 15. 6 | 16. 63 |

Exercise 25: page 69-70

- | | |
|------------|----------|
| 1. III | 2. X |
| 3. XII | 4. XX |
| 5. XVIII | 6. XXX |
| 7. XXII | 8. IX |
| 9. XVI | 10. XXXV |
| 11. XXXII | 12. XIV |
| 13. XXXIII | 14. XVI |
| 15. XXV | |

Exercise 26: page 71-76**A**

- | | |
|-------|-------|
| 1. 4 | 2. 2 |
| 3. 15 | 4. 15 |
| 5. 9 | 6. 21 |
| 7. 38 | 8. 2 |

B

- | | |
|---------|---------|
| 1. 42 | 2. 60 |
| 3. 3 | 4. 11 |
| 5. 228 | 6. 6 |
| 7. 5 | 8. 312 |
| 9. 15 | 10. 18 |
| 11. 768 | 12. 544 |

C

- | | |
|------------------|---------|
| 1. 77 | 2. 104 |
| 3. 25 | 4. 15 |
| 5. 40 | 6. 18 |
| 7. 4 | 8. 0 |
| 9. $\frac{1}{2}$ | 10. 260 |
| 11. 135 | 12. 180 |

D

- | | |
|----------|----------|
| 1. 17 | 2. 16 |
| 3. 90 | 4. 25 |
| 5. 80 | 6. 32 |
| 7. 165 | 8. $3/4$ |
| 9. $1/4$ | |

E

- | | |
|------------|------------|
| 1. 7 | 2. 5 |
| 3. 10 | 4. 11 |
| 5. 96 | 6. 120 |
| 7. 9 | 8. 7 |
| 9. 7 | 10. 17 |
| 11. 19 | 12. 12 |
| 13. $1/40$ | 14. $9/64$ |
| 15. 2 | |

Exercise 27: page 77-78**A**

1. 25, 29, 100, 175
2. 7, 52, 115, 151
3. 70, 145, 220, 265
4. 19, 40, 100, 145
5. 28, 61, 85, 205
6. 31, 67, 103, 139
7. 55, 130, 169, 211
8. 49, 64, 121, 202

B

- | | |
|------|------------|
| 1. d | 2. c |
| 3. c | 4. a (125) |
| 5. b | 6. a |
| 7. a | 8. b |
| 9. b | 10. b |

Exercise: 28 page 79-84**A**

- | | |
|------|------|
| 1. a | 2. c |
| 3. c | 4. b |
| 5. a | 6. c |
| 7. a | 8. d |

B

- | | |
|------|------|
| 1. a | 2. c |
| 3. d | 4. b |
| 5. d | 6. c |

- | | |
|------|-------|
| 7. a | 8. c |
| 9. a | 10. c |

C

- | | |
|------|-------|
| 1. d | 2. b |
| 3. b | 4. a |
| 5. c | 6. a |
| 7. d | 8. b |
| 9. a | 10. d |

Exercise 29: page 85-86**A**

- | | |
|------|------|
| 1. a | 2. c |
| 3. a | 4. a |
| 5. d | 6. c |
| 7. c | 8. d |

B

- | | |
|------|------------|
| 1. a | 2. c |
| 3. c | 4. a |
| 5. b | 6. a |
| 7. c | 8. (25:31) |

Exercise 30 : page 87

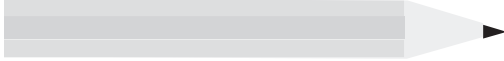
- | | |
|------|-------|
| 1. b | 2. a |
| 3. b | 4. d |
| 5. a | 6. d |
| 7. b | 8. c |
| 9. a | 10. c |

Exercise 31: page 90-94**A**

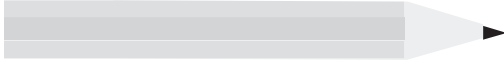
- | | |
|------|-------|
| 1. c | 2. a |
| 3. b | 4. d |
| 5. c | 6. a |
| 7. c | 8. d |
| 9. c | 10. d |

B

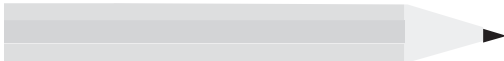
- | | |
|------|------|
| 1. a | 2. b |
| 3. a | 4. c |
| 5. a | 6. c |
| 7. b | 8. a |

Exercise 32: page 95-99**A** 


- | | |
|------|------|
| 1. a | 2. b |
| 3. d | 4. b |
| 5. d | 6. a |
| 7. b | 8. c |

B 

- | | |
|------|-------|
| 1. c | 2. b |
| 3. a | 4. c |
| 5. b | 6. d |
| 7. a | 8. c |
| 9. d | 10. b |

C 

- | | |
|------|--------|
| 1. c | 2. c |
| 3. a | 4. d |
| 5. c | 6. b |
| 7. a | 8. d |
| 9. c | 10. 72 |

D 

- | | |
|---------------|---------------|
| 1. 10/17 | 2. 5/11 |
| 3. 7/5 | 4. 10, 20 |
| 5. 6/11, 6/10 | 6. 2,1,3 |
| 7. 9,10, 30 | 8. 4445, 5556 |

Exercise 33: page 101-104

- | | |
|------|-------|
| 1. c | 2. a |
| 3. b | 4. a |
| 5. b | 6. c |
| 7. a | 8. c |
| 9. a | 10. c |


Exercise 34: page 104

- | | |
|------|-------|
| 1. b | 2. a |
| 3. b | 4. d |
| 5. c | 6. a |
| 7. b | 8. b |
| 9. a | 10. b |

Exercise 35: page 105-107

- | | |
|------|------|
| 1. c | 2. a |
| 3. a | 4. b |
| 5. b | 6. c |

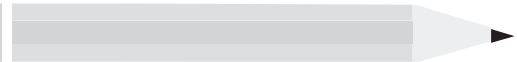
- | | |
|------|-------|
| 7. c | 8. a |
| 9. c | 10. a |

Exercise 36: page 108-111**A** 

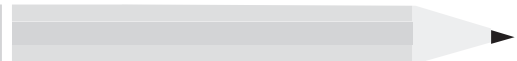
- | | |
|------|------|
| 1. a | 2. c |
| 3. c | 4. a |
| 5. c | 6. c |
| 7. b | 8. a |

B 

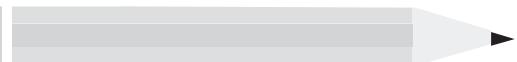
- | | |
|-------|---------|
| 1. a | 2. c |
| 3. b | 4. c |
| 5. b | 6. a |
| 7. d | 8. (89) |
| 9. b | 10. a |
| 11. b | 12. d |
| 13. d | 14. c |

C 

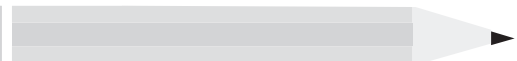
- | | |
|-------------------|-------|
| 1. 12 | 2. 12 |
| 3. 6 | 4. 1 |
| 5. 5 | 6. 3 |
| 7. $1\frac{7}{8}$ | 8. 18 |

Exercise 37: page 112-114**A** 

- | | |
|------|-------|
| 1. c | 2. b |
| 3. a | 4. b |
| 5. a | 6. d |
| 7. b | 8. b |
| 9. a | 10. d |

B 

- | | |
|------|-------|
| 1. b | 2. d |
| 3. c | 4. c |
| 5. d | 6. a |
| 7. b | 8. d |
| 9. d | 10. c |

Exercise 38: page 115-119**A** 

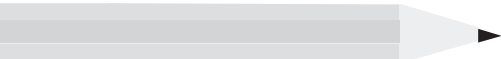
- | | |
|-------|--------|
| 1. GD | 2. 3 |
| 3. 12 | 4. 504 |
| 5. a | 6. d |
| 7. 0 | 8. a |

B 

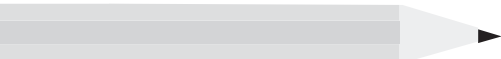
- | | |
|------|-------|
| 1. c | 2. d |
| 3. d | 4. a |
| 5. c | 6. 2 |
| 7. 0 | 8. b |
| 9. a | 10. d |

Practice Test 1: page 120

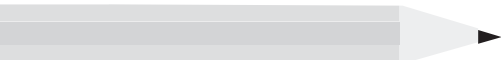
- | | |
|------|------|
| 1. b | 2. a |
| 3. c | 4. a |
| 5. d | 6. d |
| 7. a | 8. c |

Practical Test 2: page 121-122**A** 

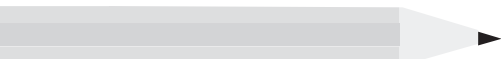
- | | |
|------|------|
| 1. c | 2. d |
| 3. b | 4. d |
| 5. d | 6. b |
| 7. a | |

B 

- | | |
|------|------|
| 1. c | 2. a |
| 3. b | 4. c |

Practice Test 3: page 123-124**A** 

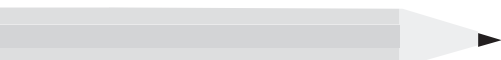
- | | |
|------------------------|-----------|
| 1. 53, 64 | 2. 21, 7 |
| 3. 3, 1 | 4. 31, 36 |
| 5. 2, Not possible (0) | 6. 24, 32 |

B 


- | | |
|------|------|
| 1. d | 2. a |
| 3. b | 4. a |
| 5. b | 6. a |

Practice Test 4 : page 125

- | | |
|------|------|
| 1. b | 2. c |
| 3. c | 4. a |
| 5. a | 6. b |
| 7. a | 8. b |

Practice Test 5: page 126-127**A** 

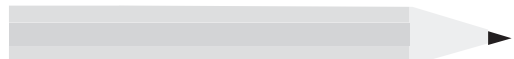
- | | |
|------|------|
| 1. b | 2. a |
| 3. a | 4. a |
| 5. d | 6. d |

B 

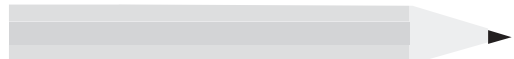
- | | |
|------|------|
| 1. b | 2. c |
| 3. a | 4. b |
| 5. c | 6. b |

Practice 6: page 128-129**A** 

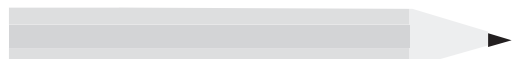
- | | |
|-------------|------------|
| 1. 20 | 2. 15 |
| 3. 10 | 4. 8 |
| 5. 19 | 6. 25 |
| 7. 68 | 8. 636 |
| 9. 119, 126 | 10. 55 odd |

B 

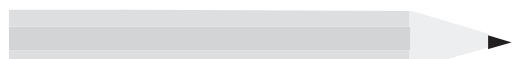
- | | |
|------|---------|
| 1. c | 2. c |
| 3. a | 4. c |
| 5. c | 6. (32) |

Practice Test 7: page 130-131**A** 

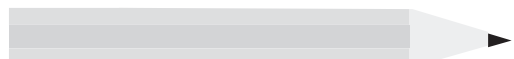
- | | |
|-------|-------|
| 1. 12 | 2. 35 |
| 3. 80 | 4. 40 |
| 5. 10 | 6. 15 |
| 7. 34 | 8. 35 |

B 

- | | |
|---------|------------|
| 1. CAT | 2. 8931726 |
| 3. TIDE | 4. ACI |
| 5. 5471 | 6. TON |
| 7. TUTI | 8. 4915 |

C 

- | | |
|------|------|
| 1. c | 2. a |
| 3. a | 4. a |
| 5. c | 6. b |

Practice Test 8: page 132-134**A** 

- | | |
|----------------------|----------------|
| 1. FD | 2. DB |
| 3. BH | 4. C |
| 5. AH | 6. 8, 9, 11, 5 |
| 7. 6, 1, 9, 12, 5, 4 | 8. ABC |

9. $9\frac{3}{5}$ 10. 10, 1, 3, 11
 11. BA 12. DB

B

1. $8+4+3+1=16$
 2. $3+4+4+9+6=26$
 3. 37
 4. $8+1+2=11$
 5. 22
 6. $2+4+6+9=21$
 7. 8
 8. 35
 9. Red 8 + White 15 + Blue 2 = 25
 10. None

C

1. a 2. a
 3. b 4. b
 5. c 6. b
 7. d 8. a

Practice Test 9 : page 135-137**A**

1. 35 2. 19
 3. 16 4. 16
 5. 7 6. 16
 7. 8 8. $7+8+6=21$

B

1. 81, 27, 9, 3, 1, 0
 2. 4, 8, 12, 16, 20, 24
 3. 4, 12, 20, 28
 4. 20, 15, 10, 5
 5. 10, 5, 12, 6, 14, 7, 16

C

1. 25 2. 13
 3. 196 4. 12
 5. 121, 42, 25 6. 361, 144, 100

D

1. 12 2. 3
 3. 10 4. 11
 5. 12 6. 6
 7. 2 8. 12
 9. 4 10. 12

Practice Test 10 : page 138-140**A**

1. c 2. b
 3. b 4. c
 5. b 6. d

B

1. a 2. a
 3. c 4. b
 5. b 6. c

C

1. 60 2. 3600
 3. 1440 4. 84,400
 5. Anti meridian (Morning), Post Meridian (Afternoon)
 6. 3 PM 7. 11 PM
 8. 12 midnight

Practice Test 11: Page 141-142**A**

1. 79 2. 11
 3. 17 4. 12
 5. 99 6. 1
 7. 18 8. 8
 9. $\frac{1}{6}$ 10. $\frac{4}{4}$
 11. $125 \times 6 = 750$ 12. 10

B

1. b 2. a
 3. b 4. c

Practice Test 12: page 143-144**A**

1. c 2. b
 3. a 4. c
 5. c 6. b

B

1. c 2. b
 3. c 4. a