

Unit 4.1

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|------------------|-------------------------------------|--------------------|------------------|
| 1. a) zero | b) commutative | c) associative | d) identity |
| e) associative | f) commutative | g) identity | h) associative |
| i) zero | j) commutative | k) identity | l) commutative |
| m) zero | n) commutative | o) associative | |
| 3. a) 0; zero | b) 114; commutative | c) 90; associative | d) 357; identity |
| e) 105; identity | f) 0; zero | | |
| 4. a) 0 | b) 22 | c) 1 | d) 11 |
| e) 35 | f) 20 | 5. 1,825 | 6. 11,800 |
| 7. c | 8. $(42 \times 7) \times 9 = 2,646$ | 9. 20,100 | 11. 27 |

Unit 4.2

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| 1. a) 35; 350; 3,500; 35,000 | b) 48; 480; 4,800; 48,000 |
| c) 360; 3,600; 36,000; 360,000 | d) 3,060 |
| f) 9,200 | e) 11,000 |
| g) 12,600 | h) 13,360 |
| i) 774,000 | j) 720,000 |
| 2. yes; 4,000 contain, 3 zero | |
| 3. 27,000 | 4. 45×2 and then put total zero |
| 5. b | |
| 6. $x=70$; $y=700$ | 7. 400 minutes |
| 8. a) 120,000 | b) 200 |
| c) 25 | d) 200 |
| e) 800 | f) 20 |
| 9. \$25,200 | 10. 7,000 |
| 11. same number of zero | |

Unit 4.3

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| 1. a) 1,600 | b) 350 | c) 1,800 | d) 1,200 |
| e) 12,000 | f) 10,000 | g) 10,000 | h) 5,400 |
| i) 54,000 | j) 2,000 | k) 6,000 | l) 80,000 |
| 2. compatible number method | | 4. 28,000 closer to 32,000 | |
| 5. yes; about \$420 | 6. yes | 7. 30,000 and 36,000 is 6,000 | |
| 8. about 16,000 | 9. 54,000; over | 10. 1,200 gm | 11. c |
| 12. yes | | | |

Unit 4.4

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| 1. a) 243 | b) 468 | c) 623 | d) 392 |
| e) 1,494 | f) 2,262 | g) 1,452 | h) 695 |
| i) 2,232 | j) 3,738 | k) 4,912 | l) 999 |
| m) 1,977 | n) 1,648 | o) 1,998 | p) 3,256 |
| q) 4,626 | r) 2,415 | s) 891 | t) 1,962 |
| 3. 7,896 MB | 4. \$7,911 | 5. 1,092 gm | 6. 5,850 cm |
| 7. a) 8,307 | b) 70,352 | c) 55,237 | d) 70,047 |
| e) 45,035 | 8. \$900 | 9. \$6,822 | 10. 18,728 |
| 11. 30,275 | | | |

Unit 4.5

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|---------------|--------------|------------|------------|
| 1. a) 464 | b) 1,872 | c) 858 | d) 1,815 |
| e) 2,655 | f) 780 | g) 2,822 | h) 2,156 |
| i) 1,188 | j) 3,225 | k) 266 | l) 1,848 |
| m) 2,814 | n) 3,026 | o) 5,049 | p) 804 |
| 2. 1,872 | 3. 840 grams | 4. yes | |
| 5. a) 968 | b) 714 | c) 408 | d) 988 |
| e) 944 | f) 1,296 | g) 1,089 | h) 3,905 |
| i) 2,001 | j) 2,574 | k) 1,196 | l) 3,596 |
| 6. a) \$1,564 | b) \$3,104 | c) \$3,332 | d) \$2,916 |
| 7. \$1,156 | | | |
| 8. 2,277 | | | |

Unit 4.6

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| 1. a) 11,050 | b) 17,408 | c) 26,838 | d) 2,015 |
| e) 40,050 | f) 20,640 | g) 5,377 | h) 20,298 |
| i) 33,176 | j) 28,842 | k) 5,046 | l) 71,978 |
| 2. a) 10,872 | b) 12,054 | c) 20,358 | d) 26,220 |
| e) 29,640 | f) 30,618 | g) 29,154 | h) 25,248 |
| i) 18,690 | j) 30,634 | k) 11,160 | l) 32,596 |
| 3. 8,030 | 4. 4,182 | 5. 3,240 | 6. \$8,775 |
| 7. 10,944 | 8. a) 11,336 | b) \$219.49 | |

Unit 4.7

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| 1. c | 2. a) 360 | b) 210 | c) 405 |
| d) 343 | 3. a) 46,000; 460,000 | | b) 99; 9,900 |
| c) 100; 10,000 | d) 455; 45,500 | | |
| 4. 14,700 | 5. d | 6. a) 2,000,000 → over estimate | |
| b) 5,000,000 → under estimate | | 7. 23,946; (20,000 → under estimate) | |
| 8. b | 9. a) 3,366 | b) 6,942 | c) 5,382 |
| d) 3,835 | 10. \$26.52 | 11. a) \$9,744 | b) yes |
| c) 3,015 | d) \$130,002 | e) \$3,243 | |
| 12. 2,744; 12,768; 37,996; 62,496 | | | |
| 13. \$1311.52 | 14. 214.375 lb | | |