

Answer Book

for

Mathematical Problem Solving

Book 6

Strategy for Solving Real-World Problems

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Chapter 1: Mathematical Operations**Lesson 1.1:**

1. fewer
2. (a)
3. (a)
4. (a)
5. increased by
6. (b)
7. Difference between
8. (b)
9. (b)
10. total of
11. (a)
12. raise
13. (a)
14. (b)
15. fewer
16. (a)

Lesson 1.2:

1. product of
2. (a)
3. (b)
4. (a)
5. (b)
6. twice
7. divided equally
8. % of
9. times
10. (b)
11. Divide by
12. One-sixth of
13. (b)
14. (a)
15. per
16. (a)
17. (b)

Lesson 1.3:

1. fewer
2. (b)
3. increase of
4. (c)
5. (a)
6. (a)
7. Double
8. (b)
9. (c)
10. per
11. (c)
12. (c)
13. two-fifths of
14. (b)
15. % of
16. (b)

Lesson 1.4:

1. times
2. (a)
3. fewer
4. (b)
5. (b)
6. (a)
7. (c)
8. difference between
9. (d)
10. altogether
11. Divide by
12. % of
13. (a)
14. (c)
15. (b)
16. one-third of

Lesson 1.5:

1. times
2. (b)
3. increase of
4. (b)
5. (b)
6. (c)
7. (c)
8. (a)

Lesson 1.6:

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

Lesson 1.7:

1. Total of
2. (b)
3. (a)
4. one-fourth of
5. (a)
6. Divide by
7. (c)
8. (c)
9. (b)
10. (a)
11. (c)
12. (b)
13. (d)
14. (b)
15. left

Chapter 2: Basic Problem-Solving Strategy**Lesson 2.1:**

1. 26 miles
2. 598 kilometers
3. $6\frac{2}{5}$
4. three-fifths of
5. (a)
6. \$21.00
7. 5 bottles
8. \$30.00
9. (d)
10. 2 liters
11. 8 bags
12. % of
13. (c)
14. \$2500.00

Lesson 2.2:

1. 9 kilograms
2. 1,320 kilograms
3. 70 kilograms
4. 288 miles
5. 22 miles
6. (b)
7. 30 children

Lesson 2.3:

1. 3 hours
2. 8:03 a.m.
3. 2 hours
4. 552 kilometers
5. 1.1 hours
6. 2 hours
7. (c)

Lesson 2.4:

1. \$85.90
2. 2 pencils
3. \$4.00
4. (b)
5. \$1,125.00
6. 9 biscuits
7. (a)
8. 9 burgers

Lesson 2.5:

1. 9.2 centimeters
2. \$40.00
3. \$35.00
4. 10 miles
5. \$22.00
6. \$53.40
7. 17 sentences
8. \$80.00
9. \$109.00
10. \$6.83

Lesson 2.6:

1. \$38.52
2. 12:00 p.m.
3. 9 minutes
4. 69 minutes
5. \$112.75
6. 10:35 a.m.
7. 4:03 p.m.
8. 122 minutes
9. \$365.45

Lesson 2.7:

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

Lesson 2.8:

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

Lesson 2.9:

1. (a)
2. 21
3. (c)
4. 45
5. (a)
6. 32
7. (b)
8. (c)
9. 35

Lesson 2.10:

1. (d)
2. 19 toys
3. (c)
4. 32 cards
5. (a)
6. 28 apples
7. (a)
8. (a)
9. (a)

Lesson 2.11:

1. \$54.00
2. % of
3. (b)
4. 394 miles
5. (b)
6. 6:18 p.m.
7. \$160.50
8. (b)
9. (d)
10. 9 bottles
11. (a)
12. 1.5 hours
13. 97 students
14. \$7.00

Chapter 3: Unitary MethodLesson 3.1:

1. 54 people
2. 140 ice cream cones
3. 204 containers
4. 315 carpenters
5. 481 pieces of fruit
6. 187 worker bees
7. 15 days
8. 27 students
9. 16 workers
10. 27 birds
11. 11 rabbits
12. 56 kilograms

Lesson 3.2:

1. 96 days
2. 6 hours
3. 10 days
4. 84 days
5. 10 days
6. 21 days
7. 16 hours
8. 10 hours
9. 138 days
10. 10 hours
11. 18 hours
12. 144 minutes

Lesson 3.3:

1. 120 burgers
2. 45 days
3. 80 minutes
4. 3.2 hours
5. 7 days
6. 350 seconds
7. 6 hours
8. 9 minutes
9. 72 minutes
10. 210 bottles

Lesson 3.4:

1. 150 pages
2. $(4/15)$ of the task
3. $(1/2)$ of the marathon
4. $(9/16)$ of the doll
5. $153(1/3)$ seconds
6. $(1/9)$ of the garden
7. 14 pages
8. $(1/3)$ of the home
9. 720 kilometers
10. 165 kilometers

Lesson 3.5:

1. 104 pages
2. $(1/3)$ of sweet boxes
3. 50 boxes
4. 18 minutes
5. 6 cakes
6. 112.5 minutes
7. $(1/4)$ of the task
8. $1(3/4)$ minutes
9. $(1/4)$ of the task
10. 4 hours
11. 33 skirts

Lesson 3.6:

1. $3(3/5)$ hours
2. $7(1/5)$ days
3. 7 minutes
4. $2(6/11)$ hours
5. $1(1/5)$ hours
6. $3(3/7)$ hours
7. 12 minutes

Lesson 3.7:

1. 48 students
2. 90 kilometers
3. $2(6/11)$ hours
4. $(5/8)$ of the task
5. 12 hours
6. 45 square meters
7. 144 minutes
8. $3(3/4)$ hours
9. $(2/3)$ of the toy
10. 18 minutes
11. 10 minutes
12. 36 seconds
13. 112 minutes
14. 7 camels
15. 28 days
16. 9 hours
17. 15 days
18. 660 kilometers
19. $2(8/11)$ hours

Chapter 4: Number Problems**Lesson 4.1:**

1. 439,781
2. 996
3. 6,908
4. 1,010
5. 3,391
6. 10,011
7. 96
8. 7,250
9. 1,101
10. 995
11. 10,001
12. 789
13. 62,496
14. 1,000

Lesson 4.2:

1. 99.9
2. 17.274
3. 41.01
4. 13.996
5. 3.9001
6. 8.421
7. 9
8. 25.88

Lesson 4.3:

1. (b)
2. 4
3. 210
4. (a) and (c)
5. 8
6. 300
7. 336
8. (a)
9. 33
10. 86

Lesson 4.4:

1. 8:42 a.m.
2. 210
3. 8 lunch boxes
4. 17
5. 9 bags
6. 9:00 a.m.
7. 1
8. 5 bouquets
9. 504
10. 9 boxes

Lesson 4.5:

1. (a)
2. 10,101
3. 5
4. 6.1
5. 9 lunches
6. 12.48
7. 60
8. 95
9. 25.59
10. 70
11. 94.01
12. 3 baskets
13. 9.9
14. (d)
15. 1,101
16. 7 jars
17. 3.4447
18. 90
19. 336
20. 36,849

Chapter 5: Age ProblemsLesson 5.1:

1. 2 years
2. 32 years
3. 37 years
4. 15 years
5. 24 years
6. 13 years
7. 60 years
8. 22 years
9. 45 years
10. 22 years

Lesson 5.2:

1. 21 years
2. 7 years
3. 56 years
4. 4 years
5. 8 years
6. 35 years
7. 44 years
8. 4 years
9. 21 years
10. 50 years

Lesson 5.3:

1. 8 years
2. 3 years
3. 4 years
4. 5 years
5. 27 years
6. 26 years
7. 21 years
8. 38 years

Lesson 5.4:

1. 25 years
2. 11 years
3. 11 years
4. 5 years
5. 6 years
6. 9 years
7. 29 years
8. 19 years

Lesson 5.5:

1. 28 years
2. 13 years
3. 30 years
4. 9 years
5. 11 years
6. 21 years

Lesson 5.6:

1. 33 years
2. 30 years
3. 32 years
4. 33 years
5. 9 years
6. 15 years
7. 17 years
8. 40 years
9. 22 years
10. 8 years
11. 15 years
12. 25 years

Chapter 6: Time and Distance Problems**Lesson 6.1:**

1. 1.25 meters per second
2. 12 gifts per box
3. 11 people per group
4. \$8.00 per bucket
5. 45 miles per hour
6. 24 meters per second
7. 84 kilometers per hour
8. 5 ribbons per basket
9. 65 kilometers per hour
10. 84 miles per hour
11. 495 miles per hour
12. 62 kilometers per hour

Lesson 6.2:

1. 510 kilometers
2. 1,488 miles
3. 1.5 miles
4. 15 kilometers
5. 3.75 miles
6. 560 kilometers
7. 270 miles
8. 30 miles

Lesson 6.3:

1. 2 hours
2. 11 hours
3. 7 hours
4. 8 hours
5. 5 seconds
6. 20 hours
7. 24 minutes
8. 35 minutes

Lesson 6.4:

1. (a)
2. 9 lunch packs
3. 6 supporting staffs
4. (a)
5. (a)
6. 5 boxes of cookies
7. (a)
8. 7 candy jars

Lesson 6.5:

1. 72 kilometers per hour
2. 6 hours
3. 6 miles per day
4. 32 miles per hour
5. 600 meters per minute
6. 4.75 miles
7. 6 hours
8. 9 hours

Lesson 6.6:

1. 3.5 hours
2. 3 hours
3. 1.5 hours
4. 4 hours
5. 3 hours
6. 5 hours
7. 7 hours
8. 330 minutes

Lesson 6.7:

1. 2 miles
2. 4 hours
3. 6 people per car
4. 8 lunch packs
5. 64 miles per hour
6. (a)
7. 31 students per class
8. 3 hours
9. 50 meters per minute
10. 8 hours
11. 50 kilometers per hour
12. 5 hours
13. 2 hours
14. 645 kilometers
15. (c)

Chapter 7: Money Problems**Lesson 7.1:**

1. (b)
2. (b)
3. (c)
4. (a)
5. (c)
6. (c)
7. $5\frac{1}{3}$ years
8. (b)
9. \$6,908.50

Lesson 7.2:

1. \$12,107.50
2. \$815.75
3. \$648.00
4. \$11,043.55
5. \$875.00
6. \$1,620.00
7. \$48,692.00
8. \$1,335.00

Lesson 7.3:

1. 2.5%
2. 5%
3. 10%
4. 5%
5. 3%
6. 10%
7. 4%
8. 2%
9. 5.6%
10. 5%

Lesson 7.4:

1. 2 years
2. 5 years
3. 6 years
4. 6.25 years
5. 2.5 years
6. 4 years
7. 1.5 years
8. 3 years
9. 4 years
10. 2 years

Lesson 7.5:

1. \$4,000.00
2. \$6,295.00
3. \$307,200.00
4. \$2,750.00
5. \$5,250.00
6. \$11,100.00
7. \$3,550.00
8. \$2,992.00

Lesson 7.6:

1. \$210.00
2. \$448.80
3. \$18,522.00
4. \$2,862.25
5. \$5,559.00
6. \$1,399.20

Lesson 7.7:

1. \$1,205.00
2. 2 years
3. (b)
4. 6%
5. \$21.75
6. \$1,360.00
7. (c)
8. \$1,500.00
9. 8 years
10. \$2,205.00
11. 8%
12. \$1,146.25
13. 6.5 years
14. \$2,000.00
15. \$10,080.00

Chapter 8: Work Problems**Lesson 8.1:**

1. 66 elephants
2. 24 parrots
3. 16 workers
4. 14 gardeners
5. 30 managers
6. 51 people
7. 24 gardeners
8. 6 people

Lesson 8.2:

1. 25 minutes
2. 14 hours
3. 9 hours
4. 15 days
5. 7 minutes
6. 45 minutes
7. 8 days
8. 10 hours
9. 16 days
10. 60 minutes

Lesson 8.3:

1. 320 seconds
2. 14 hours
3. 32 minutes
4. 5 seconds
5. 9 days
6. 30 minutes
7. 141 milliseconds
8. 32 minutes
9. 210 minutes
10. 10 days

Lesson 8.4:

1. 24 days
2. 3.5 hours
3. 6 minutes
4. 6 days
5. 4 hours
6. 2 minutes

Lesson 8.5:

1. 4.5 minutes
2. 11
3. 10 days
4. 78 students
5. 6 minutes
6. 3 hours
7. 2
8. 12 students

Lesson 8.6:

1. 32 minutes
2. 12 minutes
3. 5 hours
4. 8 minutes
5. 3
6. 16 workers
7. 15 minutes
8. 6 days
9. 6 days
10. 5 hours
11. 40 days
12. 20 days

Chapter 9: Mixture Problems**Lesson 9.1:**

1. 26 milliliters
2. 45 milliliters
3. 15 milliliters
4. 100 milliliters
5. 8 milliliters
6. 28%

Lesson 9.2:

1. 30 white beads
2. 12 blue marbles
3. 7 skirts
4. 42 watermelons
5. 60%
6. 3 chocolate cakes
7. 54 pink glitter pens
8. 25 yellow marbles
9. 148 red fish

Lesson 9.3:

1. \$84.00
2. \$8.00 per liter
3. \$198.00
4. \$8.00 per kilogram
5. \$8.80 per pound
6. \$68.00
7. \$5.00 per kilogram
8. \$1,932.00

Lesson 9.4:

1. 2 hours
2. 6 hours
3. 22 minutes
4. $28\frac{4}{5}$ minutes
5. 30 hours
6. 36 minutes

Lesson 9.5:

1. 120 minutes
2. 8 minutes
3. 8 minutes
4. 150 minutes
5. 18 hours
6. 16 minutes

Lesson 9.6:

1. 70 minutes
2. 78 blue ribbons
3. 18%
4. 20%
5. 6 red marbles
6. 2 hours
7. 8 hours
8. 16.5 milliliters
9. 21 minutes
10. \$55.25
11. 72 minutes
12. \$3.2 per pound