

CONTENTS

Addition Mission	1
Story Problems 1	2
Subtraction Action	3
Story Problems 2	4
Take This Number, Please	5
Story Problems 3	6
60 Multiplication Facts	7
Multiplication in the Round	8
Story Problems 4	9
50 Division Facts	10
Story Problems 5	11
Division With Remainders	12
Story Problems 6	13
Mixed Operations	14
The Wheel Puzzle	16
Story Problems 7	17
Math Sequences	18
Brain Teasers	19
Story Problems 8	20
Number Cruncher	21
Story Problems 9	22
Math Puzzlers	24
Story Problems 10	26
Perception Puzzlers	28

Answer Key

PAGE 1: ADDITION MISSION

- | | | | | |
|--------|----------|------------|-------------|---------------|
| 1) 471 | 6) 623 | 11) 5052 | 16) 53,809 | 21) 581,110 |
| 2) 518 | 7) 1315 | 12) 13,480 | 17) 90,471 | 22) 246,501 |
| 3) 712 | 8) 1210 | 13) 12,126 | 18) 46,612 | 23) 598,961 |
| 4) 912 | 9) 8324 | 14) 11,370 | 19) 58,791 | 24) 1,022,994 |
| 5) 715 | 10) 5462 | 15) 21,434 | 20) 169,570 | 25) 458,278 |

PAGE 2: STORY PROBLEMS 1

- 1) 427 people total
- 2) 13 years older
- 3) 8 kilometers in 5 miles
- 4) 48 goals per day average
- 5) 25 tons for the blue whale
- 6) 12 quarts of blood in 2 people
- 7) \$38 in savings
- 8) 102 degrees average high temperature
- 9) 48 or 4 dozen stamps
- 10) 144 pencils in 1 gross; 432 pencils in 3 gross; 11 gross in 1584 pencils

NOTE: All story problems in this book may be solved using the four basic operations (+, -, x, ÷). The more difficult problems require more than one operation. The problems on each sheet are arranged by level of difficulty from easiest to most difficult. Students are able to “ease into” the story problem solving process through built-in warm-ups.

These exercises work well as once-a-week supplementary exercises, regardless of which math unit is currently being studied in class. Regular practice on story problems will keep the students’ skills sharp and teach them to put those skills to work on everyday practical problems.

PAGE 3: SUBTRACTION ACTION

- | | | | | |
|--------|----------|----------|----------|------------|
| 1) 645 | 6) 247 | 11) 5574 | 16) 121 | 21) 8733 |
| 2) 482 | 7) 187 | 12) 755 | 17) 859 | 22) 44,757 |
| 3) 18 | 8) 317 | 13) 1449 | 18) 1737 | 23) 78,247 |
| 4) 388 | 9) 6378 | 14) 539 | 19) 1089 | 24) 75,790 |
| 5) 255 | 10) 2066 | 15) 4491 | 20) 1573 | 25) 58,779 |

PAGE 4: STORY PROBLEMS 2

- | | |
|----------------------------------|--|
| 1) 40 swimmers total | 6) 260 mph |
| 2) 40 mph faster | 7) 56 years |
| 3) 54 months in 4 1/2 years | 8) Mrs. Herman’s class is ahead by 4 riddles. |
| 4) 16 tablespoons | 9) \$23.20 |
| 5) 100,800 heartbeats in one day | 10) \$3.11 for the stamps; \$6.89 change from \$10 |

PAGE 5: TAKE THIS NUMBER, PLEASE

- | | | | |
|------------|---------------|-----------------|--|
| 1) 2002 | 6) 2,002,200 | 11) 6,020,200 | 16) Sixty-three million three hundred one thousand |
| 2) 4007 | 7) 70,620 | 12) 3,300,003 | 17) Two hundred million two hundred thousand two |
| 3) 40,040 | 8) 800,400 | 13) 163,000,063 | 18) Four hundred fifty million five hundred thousand fifty |
| 4) 20,020 | 9) 6,014,012 | 14) 402,000,202 | 19) Eleven thousand seventy seven |
| 5) 200,200 | 10) 8,080,800 | 15) 7,070,700 | 20) Seven million one hundred twenty-five thousand two hundred one |

PAGE 6: STORY PROBLEMS 3

- | | |
|-------------------|---|
| 1) 180 degrees | 6) 15 students |
| 2) 190 lily pads | 7) 143 feet |
| 3) 1535 miles | 8) 11,711,000 sq. mi. |
| 4) 41 days | 9) 21,499,000 sq. mi. [28,850,000-(4,066,000 + 3,285,000)] |
| 5) 12,896 sq. mi. | 10) 183,960 hours (184,080 hrs. if you figure in 5 leap years.) |

PAGE 7: 60 MULTIPLICATION FACTS

- | | | | | | | |
|-------|--------|--------|--------|--------|--------|--------|
| 1) 14 | 10) 2 | 19) 5 | 28) 64 | 37) 0 | 46) 12 | 55) 35 |
| 2) 18 | 11) 0 | 20) 9 | 29) 21 | 38) 15 | 47) 30 | 56) 16 |
| 3) 42 | 12) 8 | 21) 28 | 30) 6 | 39) 9 | 48) 45 | 57) 0 |
| 4) 54 | 13) 2 | 22) 56 | 31) 10 | 40) 40 | 49) 0 | 58) 0 |
| 5) 28 | 14) 81 | 23) 6 | 32) 20 | 41) 32 | 50) 8 | 59) 0 |
| 6) 4 | 15) 24 | 24) 3 | 33) 0 | 42) 25 | 51) 21 | 60) 49 |
| 7) 0 | 16) 0 | 25) 12 | 34) 12 | 43) 72 | 52) 27 | |
| 8) 24 | 17) 63 | 26) 36 | 35) 0 | 44) 18 | 53) 8 | |
| 9) 0 | 18) 0 | 27) 32 | 36) 36 | 45) 24 | 54) 7 | |

PAGE 8: MULTIPLICATION IN THE ROUND

Clockwise from the top:

144, 84, 60, 96, 48, 72, 132, 108 42, 119, 84, 126, 56, 112, 63, 105
72, 36, 54, 126, 63, 27, 45, 180 180, 90, 150, 165, 105, 75, 135, 120
48, 120, 72, 128, 56, 112, 32, 104 54, 126, 90, 36, 162, 144, 108, 72

270, 144, 108, 324, 162, 135, 441, 72 96, 0, 768, 984, 352, 168, 192, 128
288, 168, 672, 320, 208, 640, 84, 1060 945, 798, 1344, 1400, 2170, 1078, 1274, 1729
500, 1125, 2000, 3125, 4500, 6125, 8000, 125 432, 276, 756, 1800, 612, 222, 696, 0

PAGE 9: STORY PROBLEMS 4

- 1) 3,615,319 sq. mi. in the U.S.
- 2) 60 shells to school; 88 left at home
- 3) 90,520 earth days in 1 year on Pluto
- 4) 5 times faster wingbeats than a housefly
- 5) 16 cups in a gallon; 128 ounces in a gallon
- 6) 5 feet average arm span
- 7) 93.8 stories average
- 8) 14% in farming
- 9) 2 times per second
- 10) 3660 beats more per hour

PAGE 10: 50 DIVISION FACTS

- 1) 6 11) 2 21) 4 31) 3 41) 8
- 2) 4 12) 3 22) 9 32) 2 42) 7
- 3) 3 13) 4 23) 2 33) 4 43) 7
- 4) 5 14) 3 24) 6 34) 9 44) 2
- 5) 2 15) 7 25) 9 35) 6 45) 9
- 6) 7 16) 4 26) 3 36) 8 46) 8
- 7) 4 17) 1 27) 4 37) 7 47) 6
- 8) 8 18) 3 28) 2 38) 6 48) 7
- 9) 9 19) 7 29) 5 39) 6 49) 5
- 10) 8 20) 7 30) 5 40) 2 50) 8

PAGE 11: STORY PROBLEMS 5

- 1) the year 1801
- 2) 316,615 sq. mi. for New Guinea
- 3) 4,719,000,000 people in 1983
- 4) \$3.00 per car
- 5) 420 miles for a dozen pencils
- 6) 10 apple trees
- 7) 13% of the earth's land surface
- 8) \$1.35 per day; \$9.45 per week
- 9) 23 miles per day
- 10) 280 miles per day

PAGE 12: DIVISION WITH REMAINDERS

- 1) 77, R:1 8) 82, R:23 15) 86, R:20
- 2) 22, R:12 9) 113, R:16 16) 21, R:307
- 3) 65, R:3 10) 90, R:48 17) 307, R:117
- 4) 5, R:19 11) 23, R:2 18) 16, R:230
- 5) 212, R:1 12) 59, R:22 19) 3, R:5548
- 6) 193, R:7 13) 97, R:9 20) 253, R:293
- 7) 21, R:33 14) 41, R:44

PAGE 13: STORY PROBLEMS 6

- 1) 978 ft. high 6) 1535 times its own weight
- 2) 4051 ft. total height 7) \$31.80
- 3) 216 workers 8) 60 mph average
- 4) 1100 cans total 9) About 9653 ft. high
- 5) 2000 ft. high 10) \$1 is needed to reach \$1,000,000

PAGES 14-15: MIXED OPERATIONS

- 1) 4235 9) 13,680 17) 3810 25) 7
- 2) 13,150 10) 46,057 18) 2669 26) 40
- 3) 13,953 11) 6693 19) 8150 27) 16
- 4) 8441 12) 26,180 20) 11,288 28) 19
- 5) 1088 13) 62 21) 3570 29) 0
- 6) 4983 14) 33 22) 541 30) 82
- 7) 1626 15) 77 23) 237 31) 146
- 8) 1530 16) 38 24) 200 32) 10

PAGE 16: THE WHEEL PUZZLE Clockwise from the top: 1, 2, 3, 4, 5, 6, 7, 8, 9, 19, 18, 17, 16, 15, 14, 13, 12, 11; 10 is in the center

PAGE 17: STORY PROBLEMS 7

- 1) 1,068,360 sq. mi. 6) 3285 tons/year; 6570 tons in 2 years
- 2) 15,610 km. total 7) \$3.14 for miscellaneous items
- 3) 2.8 gallons per minute 8) 5 hours of television
- 4) 5400 times/minute; 324,000 times/hour 9) Yes, the \$100 will cover the trip; \$.50 left over

5) Approx. 4 years

10) 30% reflected into space

PAGES 18: MATH SEQUENCES

- 1) 9; formula: +3, -1, +3, -1, etc.
- 2) 32; formula: double the number
- 3) 49; formula: $2x - 1$ or $x + (x - 1)$
- 4) 7; formula: $1/2x + 2$
- 5) 64; formula: Sum of all previous numbers
- 6) 51; formula: +12, +11, +10, +9, +8, etc.
- 7) 123; formula: $3x - 3$
- 8) 204; formula: $3x - 3$
- 9) 61; formula: $2x + 3$
- 10) 3, 2, 0; formula: They are in alphabetical order: **Eight, Five, Four, Nine, One, Seven, Six, Three, Two, Zero**

PAGE 19: BRAIN TEASERS

Brent is eleven years old (11); Maria is nine years old (9); Katie is ten years old (10); and Mario is eight years old (8).

Brad's favorite sport is ice skating; Sasha's favorite sport is tennis; Ira's favorite sport is swimming; and Ted's favorite sport is basketball.

PAGE 20: STORY PROBLEMS 8

- 1) 2,647,000,000 miles (almost 50 times as far)
- 2) 1:30 a.m. the next day; 8:00 a.m.
- 3) 385 meals/week; 20,075 meals/year if figured on 365 days (20,020 meals/year if figured on 52 weeks)
- 4) 260.5 inches
- 5) \$43.12
- 6) 12.5 humans
- 7) 16,800,441 circulation for TV Guide
- 8) 435.6 sq. ft. per cow
- 9) Least: 84 rabbits; most: 512 rabbits
- 10) 62.5 years average

PAGE 21: NUMBER CRUNCHER

See puzzle below

6	6	2	5	5	2	1	5	5	1
5				5	4	3	4	2	6
5	9	6	3	7	8	6	3		
2			4	1	2	1	8	6	
3	2	9	8					6	4
5		5	4	4		2	2	8	8
1	2		7		9	2		4	0
7		1	5	3	0		8	4	1
		2		6		4	2	7	0
	1	4	9	5		6	5	7	4
			5	6	8	1			0

PAGES 22-23: STORY PROBLEMS 9

- 1) Brahms lived 7 years longer than Beethoven.
- 2) 3900 miles total
- 3) \$156.00 total in one year
- 4) 32 or 33 baby gerbils (32.5)
- 5) 587 hours; 24 1/2 days (586 hours)
- 6) 2267/hour; 38/minute
- 7) 27 1/2 yards left over; 15 yards left
- 8) 15 per month; 180 per year
- 9) 115 bones; 41%
- 10) 5836 hours; 243 times

PAGES 24-25: MATH PUZZLERS

- 1) Jim counts the number of letters in the spelling of each number. (ie., "one" has three letters, "three" has five letters, "five" has four letters, etc.)
- 2) 36 is both a "square" and a "triangle."
- 3) N | N E
- 4) | = ||| - || (1 = 3 - 2)

$$\begin{array}{r}
 1001 \\
 101 \overline{) 101101} \\
 \underline{101} \\
 0101 \\
 \underline{101} \\
 0
 \end{array}$$

PAGES 26-27: STORY PROBLEMS 10

- 1) 100,000 hairs (brunette); 60,000 hairs (redhead)
- 2) 92 miles per gallon; 828 miles on 9 gallons
- 3) Job number 3 (Job 1 pays \$80.40/wk.; Job 2 pays \$70.00/wk.; Job 3 pays \$96.00/wk.)
- 4) A chicken's heart beats 5 times faster than a human's. A human heart beats twice as fast as an elephant's heart. A chicken's heartbeat is 10 times that of an elephant's.
- 5) The Atlantic Ocean is about 32,185,000 sq. mi. The Pacific is about twice as large.
- 6) A skydiver falls an average of 3429 feet per minute.
- 7) \$18,752
- 8) 1773 (first science museum)
- 9) 56 degrees; warmer
- 10) 10,000 words per year

- 6) $888 + 88 + 8 + 8 + 8 = 1000$
 $999 + 999/999 = 1000$
- 7) Jack is 7, Julie is 13. $49 + 13 = 62$. $7 + 169 = 176$.
- 8) The children are 2, 5, 8, 11, 14, 17, 20, 23, and 26. Mrs. Perkins is 48.
 $4+25+64+121+196+289+400+529+676 = 2304 = 48^2$
- 9) $57/3 = 19$ or $57 \div 3 = 19$
- 10) It is the only number with all the digits between 0 and 9 in alphabetical order. (ie., **Eight, Five, Four, Nine, One, Seven, Six, Three, Two Zero**)

PAGE 28: PERCEPTION PUZZLERS

- 1) The new six-sided figure is a **depiction of a cube**.
- 2) $22 \div 8 = 2$: the answer is $22 \div 7 = \pi$. ($22 \div 7 = 3.142857+$; $\pi = 3.14159265+$; $\frac{XX}{VII} = \Pi$ so the answer is correct only to the first two decimal places.)