Contents

Section I

Overview

1. Rate and Unit Price 6
2. Ratio and Rate 10
3. Introducing Percent 14
4. Relating Fractions to Decimals, Percents, Rates, and Ratios 18
5. Calculating Percents 22
6. Adding and Subtracting Decimals 26
7. Multiplying and Dividing Decimals 30
8. Estimating Answers to Operations with Decimals 34

Midway Review 38

9. More Operations with Decimals 42
10. Equivalent Fractions, Simplifying and Comparing Fractions 46
11. Adding and Subtracting Fractions with Common Denominators 50
12. Adding Fractions with Unlike Denominators 54
13. Subtracting Fractions with Unlike Denominators 58
14. Multiplying Fractions by Whole Numbers 62
15. Dividing Whole Numbers by Fractions 66
16. More Operations with Fractions 70

Final Review 74

Section II

Overview

1. Place Value 80
2. Divisibility 84
3. GCF and LCM 86
4. Fractions 90
5. Decimals 94
6. Percents 98
7. Area and Perimeter 102
8. Circles 104
9. Angles 106
10. Triangles 110

Midway Review 112

11. Squares and Roots 118
12. Number Patterns 120
13. Simple Equations 124
14. Ratios and Scale Drawings 128
15. Rates 132
16. Circle Graphs 136

SAMPLE

17. Analysis of Data 138
18. Probability 140
19. Coordinates and Transformations 142
Final Review 144

Section III

Overview
1. Mixed Operations with Whole Numbers 152
2. Multiples and Factors 156
3. Addition and Subtraction of Fractions 162
4. Addition and Subtraction of Decimals 166
5. Multiplication and Division of Decimals 168
Midway Review 172
6. Operations with Decimals 176
7. Percents, Decimals, and Fractions 180
8. Ratio and Rate 184
9. Patterns 188
10. Equations 192
Final Review 196

Section IV

Overview
1. Units of Measure 202
2. Operations with Money 204
3. Time, Distance, and Speed 208
4. Perimeter and Area 210
5. Volume 214
6. Two- and Three-Dimensional Figures 218
Midway Review 222
7. Coordinates 226
8. Transformations 230
9. Graphs 234
10. Analysis of Data 238
11. Probability 242
Final Review 246

Parents' Guide 251
Answers 255

SAMPLE

1 Rate and Unit Price

EXAMPLE

Which is the better buy? 3 pounds of tomatoes for $3.78 or 5 pounds for $5.95?

<u>3 lb for $3.78</u> :

3.78 ÷ 3 = 1.26

The unit price is $1.26 per pound.

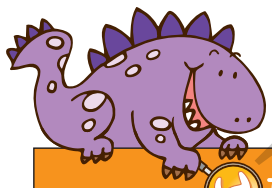
<u>5 lb for $5.95</u> :

5.95 ÷ 5 = 1.19

The unit price is $1.19 per pound.

So 5 pounds for $5.95 is the better buy.

```
    1.26          1.19
3 ) 3.78      5 ) 5.95
    3             5
    ---           ---
      7             9
      6             5
    ---           ---
     18            45
     18            45
    ---           ---
```



HINTS:

- Rate is a comparison between quantities of different units.

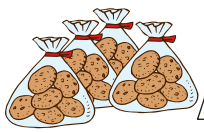
  e.g. $0.65 per box; 0.5 qt per person; 0.05 mm/sheet; $1.69/lb

- To calculate the unit price, divide the total cost by the amount. Then round the answer to the nearest cent if necessary.
- Remember to put the decimal point in the correct place in the product or quotient when doing multiplication or division with decimal numbers.
- To round a number, the digit immediately after the digit to be retained must be considered.

SAMPLE

Find the unit price for each item mentally.

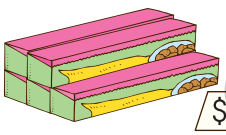
①



$ 11.00

$ _____ / bag

②



$ 16.50

$ _____ / box

③

$ 4.20

$ _____ / bottle

④

$ 4.80

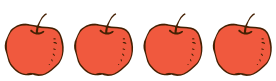
$ _____ / can

⑤

$ 10.00

$ _____ / packet

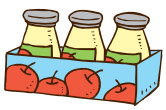
⑥



$ 1.00

$ _____ / apple

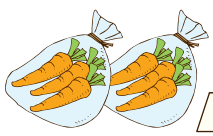
⑦



$ 0.99

$ _____ / bottle

⑧



$ 1.68

$ _____ / bag

Calculate the unit price for each item. Round to the nearest cent if necessary.

Unit Price

⑨ 2 kilograms of cereal for $5.20 $ _____

⑩ 5 bars of chocolate for $4.50 $ _____

⑪ 3 notebooks for $1.75 $ _____

⑫ 2 CDs for $24.80 $ _____

⑬ 2 pizzas for $12.40 $ _____

⑭ 6 spicy chicken wings for $4.99 $ _____

Calculate the total cost for each purchase.

Total Cost

⑮ 3 bottles of orange juice at $0.79 each $ _____

⑯ 5 ten-pack pencils at $0.87 each $ _____

⑰ 4 T-shirts at $4.99 each $ _____

⑱ 6 hamburgers at $2.60 each $ _____

⑲ 2 boxes of laundry detergent at $7.96 each $ _____

⑳ 8 correction pens at $3.75 each $ _____

Find the unit price for each quantity. Round to the nearest cent if necessary. Put a ✓ in the box for the better buy.

Item	Total Cost	Unit Price	Better Buy
㉑ Orange juice	3 cans for $1.95		
	4 cans for $2.65		
㉒ Pansy	2 pots for $4.25		
	3 pots for $6.35		

SAMPLE

Solve the problems. Show your work. Round your answers to the nearest hundredth if necessary.

㉓ Susanne's hair grows 0.32 inch per month. How long does it grow in 6 months?

It grows _____ inches in 6 months.

㉔ Peggy saves $12.50 per week. How much can she save in 5 weeks?

㉕ Gas sells at $2.49 per gallon. How much do 4 gallons cost?

㉖ Brenda buys 2 quarts of spring water for $1.42. What is the price per quart?

㉗ Mark builds a 24.4-yard long fence using 9 posts. How far apart are two adjacent posts?

㉘ Bill buys 2 pairs of shoes at $39.95 per pair. How much does he pay?

㉙ 6 friends go to Disneyland. They spend $87.00 altogether. How much does each spend if each spends an equal amount?

SAMPLE

㉚ 2.5 quarts of soda is divided equally among 8 friends. How much does each drink?

㉛ Kate drinks 2 glasses of milk daily. Each glass contains 0.3 quart of milk. How much milk does she drink per week?

㉜ Susan earns $22.50 for 5 hours of babysitting. Bob earns $12.75 for 3 hours. Who is better paid?

㉝ 3 T-shirts are sold for $14.70.

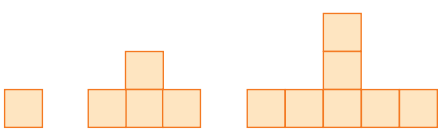
a. What is the price for each T-shirt?

b. How much do 5 T-shirts cost?

㉞ Baby Sue weighed 3.2 kilograms at birth. She gains 150 grams per week. How many kilograms does she weigh at 6 weeks?

SAMPLE

Draw the 6th pattern in the box.



1 st 2 nd 3 rd

6 th