MathLinks 8 Practice and Homework Book
Chapter 2 Answers

2 Get Ready

1. a) 3 to 6, 3:6, $\frac{3}{6}$ b) 6 to 9, 6:9, $\frac{6}{9}$
2. a) white balls : black balls
   b) black balls : total balls
3. a) Yes, because $2 \times 3 = 6$, and $3 \times 3 = 9$.
   b) Yes, because $1 \times 4 = 4$, and $5 \times 4 = 20$.
4. Answers may vary.
   a) $\frac{2}{8}, \frac{3}{12}$ b) $\frac{2}{6}, \frac{8}{24}$
5. a) 15, because $8 \times 3 = 24$, and $5 \times 3 = 15$.
   b) 15, because $1 \times 5 = 5$, and $3 \times 5 = 15$.
   Comparing Quantities: Answers may vary. For example: I would reuse the $\frac{2}{5}$ number line and number by tens.
6. Answers may vary. $\frac{14}{28}, \frac{2}{4}, \frac{7}{14}$
7. a) 10 b) 3

2.1 Two-Term and Three-Term Ratios

1. a) **False** A part-to-part ratio compares different parts of a group.
   b) **True**
   c) **False** A part-to-whole ratio can be written as a fraction, decimal, or percent. For example, the ratio of flowers to leaves is $\frac{8}{12}$ or $\frac{2}{3}$, $0.6\overline{6}$, $66.\overline{6}\%$
   d) **True**
   e) **False** A two-term ratio compares two quantities measured in the same units.
2. a) 3:9, 1:3 b) 23:9:32
   c) 5:15, 1:3 d) 8:6, 4:3
   e) 10:20;1:2 f) 16:20, 4:5
3. a) $\frac{1}{3} = \frac{2}{6}$ b) $\frac{2}{3} = \frac{10}{15}$ c) $\frac{5}{6} = \frac{10}{12}$ d) $\frac{40}{50} = \frac{80}{100}$
4. Answers may vary. Example:
   a)  b) 9:3
   c) 9:12, 3:12 d) $\frac{3}{4}, \frac{1}{4}$
5. Answers may vary. Example:
   a) hats : coats b) coats : hooks : hats
   c) hooks : coats d) hooks : whole
6. a) 8:28 b) 20:8
7. 0.18 : 0.35 : 0.47

2.2 Rates

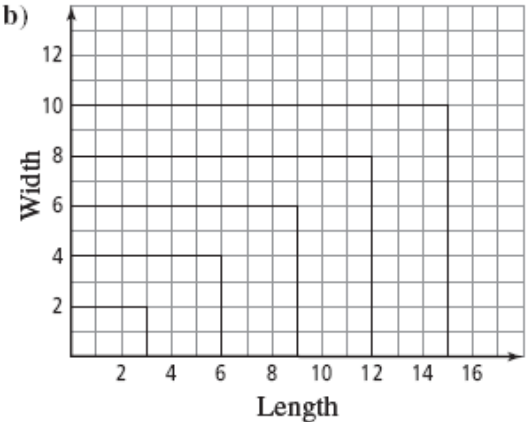
1. a) different b) fraction, percent
   c) one d) price
2. a) 16.67 km/h b) 66 words/minute
   c) 54 students/bus d) 23 apples/bag
   e) \$9/h f) 88 km/h
3. a) \$7/h, \$9.90/h b) 82 km/h, 84 km/h
   c) 4 h/day, 3 h/day
4. 9 L/100 km
5. a) Vanilla \$0.00745/g, Berry \$0.00598/g, Peach \$0.0049875/g
   b) Vanilla \$0.745 /100 g, Berry \$0.598/100 g, Peach \$0.49875/100 g
   c) The largest (peach) container costs the least money per gram.
6. a) Methods will vary. Example: $\frac{1365}{6} = \frac{x}{12}$, $x = \$2730$
   b) \$5.25/h
7. a) Canada 3.36, Ecuador 45.19, France 108.02, Netherlands 464.94, USA 29.77
   b) Netherlands, France, Ecuador, USA, Canada
   c) Yes, because it compares two quantities measured in different units.

2.3 Proportional Reasoning

1. ratios, equal
2. a) proportion, \$15 b) unit rate, \$15
3. a) 25 km/h b) \$0.25/pencil
   c) 5 m/s d) \$2/kg
4. a) 3 b) 3 c) 25 d) 12
5. a) 8 roses b) 760 km
6. a) $\frac{40\text{ cm}}{20\text{ cm}} = \frac{50\text{ cm}}{25\text{ cm}}$
   b) $\frac{60\text{ mL}}{600\text{ mL}} = \frac{100\text{ mL}}{1000\text{ mL}}$
   c) $\frac{9.4\text{ L}}{100\text{ km}} = \frac{56.4\text{ L}}{600\text{ km}}$
7. 24 players
8. a) $\frac{5}{8} = \frac{x}{40}$ Trevor is expected to complete 25 passes.
   b) $\frac{1}{16} = \frac{x}{32}$ He likely made 2 interceptions.
9. a) 16, 24 b) \$1.38, \$9.66
10. Car A
11. 150 km

2 Link It Together

1. a) 2:3
   b)



Rect-angle	Length	Width	Area (square units)	Area Difference (square units)
P	3	2	6	-
Q	6	4	24	18
R	9	6	54	30
S	*12*	*8*	*96*	*42*
T	*15*	*10*	*150*	*54*

   d) $\frac{2}{3}$ e) 216 square units

2 Vocabulary Link

1. c) proportion
2. h) unit rate
3. g) unit price
4. a) part-to-part ratio
5. b) part-to-whole ratio
6. f) two-term ratio
7. e) three-term ratio
8. d) rate