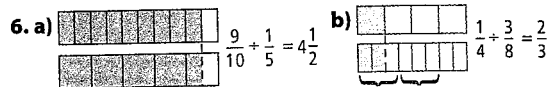
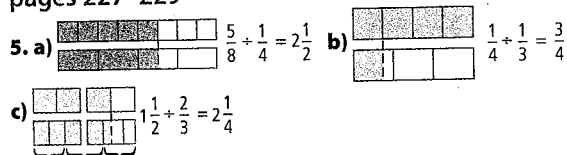


8. a) Estimates may vary. Example: 1; Answer: $1\frac{1}{7}$
 b) Estimates may vary. Example: 20; Answer: $18\frac{3}{4}$
 c) Estimates may vary. Example: 4; Answer: $3\frac{2}{3}$
 9. a) Estimates may vary. Example: 4; Answer: $4\frac{8}{9}$
 b) Estimates may vary. Example: 12; Answer: $11\frac{1}{3}$
 c) Estimates may vary. Example: 24; Answer: $22\frac{3}{4}$
 10. $7\frac{1}{2}$ laps
 11. 54 h
 12. $3\frac{1}{2}$ h
 13. a) $\frac{5}{8}$ h b) $37\frac{1}{2}$ min
 14. $4\frac{3}{8}$ times as much as the den
 15. \$96 altogether
 16. \$1.75
 17. Answers may vary. Example: The product is smaller than the mixed fraction. The product is larger than the proper fraction.
 18. Answers may vary. Example: It took Mary $3\frac{1}{3}$ h to finish her project. Roger spent $1\frac{1}{2}$ times as long as Mary to complete his project. How many hours did it take Roger to complete his project? Answer: 5 h
 19. a) If each fraction is changed to its improper fraction form, the numerator is 13, and the denominator is twice the denominator of the previous term; $\frac{13}{48}, \frac{13}{96}, \frac{13}{192}$
 b) Each term is multiplied by $\frac{3}{2}$ to get the next term;
 $20\frac{1}{4}, 30\frac{3}{8}, 45\frac{9}{16}$
 20. a) 15 b) 10 c) $12\frac{5}{6}$ d) $3\frac{11}{15}$
 21. a) $1\frac{1}{2}$ b) $1\frac{1}{3}$ c) $2\frac{1}{2}$ d) $2\frac{1}{2}$

6.5 Dividing Fractions and Mixed Numbers, pages 227-229



7. a) $\frac{2}{3}$ b) $1\frac{4}{5}$ c) $1\frac{9}{11}$
 8. a) $\frac{5}{9}$ b) $3\frac{3}{5}$ c) 4
 9. a) $\frac{15}{16}$ b) $\frac{10}{17}$ c) 16
 10. a) $\frac{13}{30}$ b) $\frac{10}{11}$ c) $\frac{1}{2}$
 11. 8 performers
 12. 6 cakes
 13. 8 glasses
 14. $\frac{2}{9}$ as much energy
 15. $1\frac{5}{6}$ as much paint
 16. $2\frac{1}{2}$ times as big as South America
 17. 20 km/h
 18. a) No. Answers may vary. Example: The reciprocal of $\frac{5}{6}$ is $\frac{6}{5}$. b) No. Answers may vary. Example:
 $\frac{9}{10} \times \frac{5}{6} = \frac{45}{60}$ c) Yes. Answers may vary. Example:
 $\frac{9}{10} \div \frac{5}{6} = 1\frac{2}{25}$
 19. a) 4200 km b) 2000 km
 20. $\frac{1}{50}$ of the Earth's surface
 21. a) 8; The quotient is doubled each time the divisor is halved.
 b) $9 \div 9 = 1, 9 \div 3 = 3, 9 \div 1 = 9, 9 \div \frac{1}{3} = 27$
 22. Answers may vary. Example: Mac can ride his scooter to his grandmother's house in $3\frac{3}{4}$ h. If he takes the bus, he can make the trip in $2\frac{1}{4}$ h. How many times longer does it take him to ride his scooter than it takes him to ride the bus? Answer: It takes Mac $1\frac{2}{3}$ times longer to ride his scooter.
 23. $4\frac{1}{3}$ times as fast
 24. $\frac{35}{39}$ of the area of Ellesmere Island