

5.2**Practice**

For use with pages 225-229

Find the sum or difference.

1. $\frac{12}{13} + \frac{12}{13}$

2. $\frac{1}{10} - \frac{9}{10}$

3. $-\frac{13}{32} + \left(-\frac{13}{32}\right)$

4. $\frac{34}{43} - \left(-\frac{12}{43}\right)$

5. $-\frac{11}{30} - \left(-\frac{7}{30}\right)$

6. $-\frac{17}{50} + \frac{19}{50}$

7. $\frac{43}{100} - \left(-\frac{17}{100}\right)$

8. $\frac{9}{80} - \frac{51}{80}$

9. $8\frac{7}{10} + 3\frac{9}{10}$

10. $5\frac{1}{7} - 6\frac{2}{7}$

11. $3\frac{1}{15} - 7\frac{11}{15}$

12. $1\frac{2}{9} - 12\frac{7}{9}$

13. $24\frac{17}{22} - 16\frac{5}{22}$

14. $\frac{4}{5} - \left(-3\frac{4}{5}\right)$

15. $20\frac{5}{6} + \left(-18\frac{5}{6}\right)$

16. $-4\frac{11}{16} - \frac{15}{16}$

Simplify the expression.

17. $\frac{7x}{20} + \frac{17x}{20}$

18. $\frac{19x}{28} + \frac{x}{28}$

19. $-\frac{9}{14x} + \frac{17}{14x}$

20. $-\frac{4x}{45} - \frac{41x}{45}$

21. $\frac{4}{x} - \frac{11}{x}$

22. $\frac{7}{24x} + \left(-\frac{5}{24x}\right)$

23. $\frac{11}{12x} - \left(-\frac{5}{12x}\right)$

24. $\frac{8}{5x} + \frac{3}{5x} - \left(-\frac{4}{5x}\right)$

Practice

For use with pages 230-235

Find the sum or difference.

1. $\frac{7}{12} + \frac{7}{10}$

2. $\frac{8}{9} + \left(-\frac{10}{21}\right)$

3. $-\frac{4}{17} + \frac{3}{5}$

4. $-\frac{3}{4} - \left(-\frac{5}{18}\right)$

5. $-\frac{1}{6} - \frac{9}{22}$

6. $-\frac{11}{12} - \frac{7}{15}$

7. $\frac{9}{20} - \frac{3}{16}$

8. $-\frac{5}{14} - \left(-\frac{9}{10}\right)$

Evaluate the expression when $x = \frac{5}{6}$ and $y = -\frac{3}{10}$.

9. $x + y$

10. $x - y$

11. $y - x$

12. $-y - x$

Find the sum or difference.

13. $5\frac{2}{7} + 7\frac{1}{6}$

14. $4\frac{5}{9} - 3\frac{2}{15}$

15. $-2\frac{8}{9} + 2\frac{5}{6}$

16. $-1\frac{5}{8} - \left(-2\frac{1}{5}\right)$

17. $1\frac{3}{4} - 4\frac{3}{14}$

18. $-6\frac{3}{25} + 3\frac{1}{2}$

19. $4\frac{9}{16} + \left(-3\frac{3}{10}\right)$

20. $-1\frac{2}{3} - \left(-1\frac{4}{11}\right)$

5.4**Practice**

For use with pages 237-241

Find the product.

1. $\frac{14}{25} \cdot \left(-\frac{3}{7}\right)$

2. $-\frac{20}{33} \cdot \left(-\frac{3}{11}\right)$

3. $51 \cdot \left(-\frac{5}{9}\right)$

4. $-\frac{7}{22} \cdot (-4)$

Find the quotient.

5. $2\frac{1}{12} \cdot \left(-10\frac{4}{5}\right)$

6. $-6\frac{3}{16} \cdot 5\frac{3}{7}$

7. $-1\frac{4}{27} \cdot \left(-3\frac{6}{11}\right)$

8. $-5\frac{1}{9} \cdot 2\frac{4}{13}$

Evaluate the expression.

9. $\frac{1}{4} \cdot \frac{8}{9} \cdot \left(-\frac{3}{5}\right)$

10. $\frac{4}{7} \cdot \left(-\frac{1}{8}\right) - \frac{3}{4}$

11. $\frac{7}{10} \cdot \frac{2}{9} + \frac{2}{3}$

Simplify the expression.

12. $\frac{20x}{9} \cdot \frac{36x^4}{5}$

13. $\frac{75x^4}{8} \cdot \frac{14x}{3}$

14. $-\frac{8x}{15} \cdot \left(-\frac{4x}{7}\right)$

15. $-\frac{x^6}{11} \cdot \left(-\frac{5x^8}{3}\right)$

16. $-\frac{13x^2}{10} \cdot \frac{6x^3}{5}$

17. $-\frac{x^6}{12} \cdot \left(-\frac{11x^5}{12}\right)$

18. $\frac{xy}{6} \cdot \frac{2x^3y}{3}$

19. $-\frac{x^2y}{4} \cdot \frac{10y^2}{3}$

Practice

For use with pages 247-252

Solve the equation. Check your solution.

1. $\frac{5}{8}x = 30$

2. $\frac{7}{11}x = 14$

3. $-\frac{7}{12}x = 14$

4. $28 = \frac{14}{15}x$

5. $-\frac{5}{6}x = 20$

6. $-24 = -\frac{12}{19}x$

7. $\frac{7}{11}x = \frac{4}{11}$

8. $\frac{4}{5}x = \frac{7}{5}$

9. $\frac{9}{10}x = \frac{2}{5}$

10. $-\frac{3}{4}x = \frac{11}{32}$

11. $\frac{3}{14} = -\frac{11}{21}x$

12. $-\frac{7}{13}x = \frac{5}{26}$

Solve the equation. Check your solution.

13. $\frac{1}{2}x + 9 = 36$

14. $\frac{4}{7}x + 8 = 28$

15. $6 = \frac{1}{2}x - \frac{1}{4}$

16. $-\frac{2}{3}x + (-10) = 14$

17. $32 = 16 - \frac{1}{2}x$

18. $29 = \frac{9}{11}x + 11$

19. $-\frac{14}{17}x + \frac{13}{17} = \frac{12}{17}$

20. $\frac{5}{11}x + \frac{4}{11} = \frac{3}{11}$

21. $\frac{8}{19} = -\frac{10}{19}x - \frac{9}{19}$

22. $\frac{2}{3}x + \frac{5}{9} = \frac{4}{9}$

23. $\frac{1}{2} = \frac{9}{14}x - \frac{4}{7}$

24. $\frac{8}{21} = -\frac{10}{21}x + \frac{3}{7}$

7.2**Practice**

For use with pages 334–339

Use a proportion to answer the question.

1. What percent of 70 is 21?
2. What percent of 48 is 12?
3. What percent of 56 is 42?
4. What percent of 105 is 63?
5. What number is 42% of 150?
6. What number is 70% of 130?
7. What number is 48% of 175?
8. What number is 15% of 160?
9. 150 is 15% of what number?
10. 21 is 12% of what number?
11. 198 is 33% of what number?
12. 264 is 55% of what number?
13. The population of a town in 2004 was 12,000. The population of the town in 1994 was 10,800. What percent of the 2004 population is the 1994 population?
14. The Royal Opera House Orchestra in London, England, includes 13 musicians who play the viola. The musicians in the viola section make up $12\frac{1}{2}\%$ of the orchestra. How many musicians are in the Royal Opera House Orchestra?

Type of card	Number of cards
birthday	12
Good Luck	15
Friendship	20
Get Well	10

7.3**Practice**

For use with pages 340-344

Write the decimal as a percent.

1. 0.41

2. 0.93

3. 0.01

4. 3

5. 0.0079

6. 0.061

Write the percent as a decimal.

7. 5%

8. 23%

9. 89%

10. 246%

11. 105.8%

12. 0.073%

13. You are reading a book that has 560 pages. You have read about $\frac{11}{20}$ of the book. What percent of the book have you read?

Write the fraction as a percent.

14. $\frac{19}{30}$

15. $\frac{8}{15}$

16. $\frac{27}{40}$

17. $\frac{15}{9}$

18. $\frac{17}{8}$

19. $\frac{13}{6}$

Practice

For use with pages 351-356

Find the percent of increase or decrease.1. Original: 400
New: 5522. Original: 800
New: 12163. Original: 1100
New: 19694. Original: 1700
New: 30945. Original: 475
New: 5896. Original: 175
New: 2597. Original: 600
New: 1748. Original: 240
New: 1569. Original: 4500
New: 400510. Original: 900
New: 32411. Original: 650
New: 9112. Original: 1460
New: 657**Find the new amount.**

13. Increase 300 by 54%.

14. Increase 2850 by 18%.

15. Increase 1425 by 4%.

16. Decrease 280 by 95%.

17. Decrease 225 by 68%.

18. Decrease 700 by 49%.