

Exercise 2.2

[06-01-31-N1]

answers on p 419

GR7

1. Simplify the following.

(a) $\frac{3}{8} + \frac{1}{4}$

(b) $\frac{2}{11} + \frac{5}{22}$

(c) $\frac{1}{8} + \frac{5}{12} + \frac{7}{16}$

(d) $\frac{4}{5} - \frac{8}{15}$

(e) $\frac{17}{20} - \frac{8}{15}$

(f) $\frac{9}{10} - \frac{5}{16} - \frac{7}{20}$

2. Simplify the following.

(a) $\frac{5}{8} + \frac{1}{8} - \frac{3}{8}$

(b) $\frac{7}{9} + \frac{1}{9} - \frac{5}{9}$

(c) $\frac{4}{5} + \frac{3}{10} - \frac{8}{15}$

(d) $\frac{7}{9} + \frac{2}{15} - \frac{29}{45}$

(e) $\frac{3}{8} - \frac{3}{4} + \frac{11}{12}$

(f) $\frac{4}{9} - \frac{7}{12} + \frac{23}{36}$

3. Simplify the following.

(a) $\frac{12}{5} + \frac{17}{15}$

(b) $\frac{7}{4} + \frac{9}{5}$

(c) $\frac{11}{3} - \frac{12}{5}$

(d) $\frac{17}{4} - \frac{13}{6}$

(e) $\frac{33}{8} + \frac{25}{14}$

(f) $\frac{31}{9} - \frac{19}{15}$

4. Evaluate the following.

(a) $2\frac{2}{3} + 4\frac{3}{5}$

(b) $3\frac{1}{3} - 1\frac{1}{5}$

(c) $6\frac{1}{9} + 3\frac{8}{21}$

(d) $2\frac{12}{17} + 4\frac{10}{34}$

(e) $5\frac{8}{15} - 2\frac{8}{25}$

(f) $9\frac{5}{14} - 4\frac{10}{21}$

5. Evaluate the following.

(a) $3\frac{5}{6} + 1\frac{1}{2} - 2\frac{1}{4}$

(b) $4\frac{3}{8} + 2\frac{5}{12} - 3\frac{1}{6}$

(c) $5\frac{1}{2} - 2\frac{1}{3} + 1\frac{5}{6}$

(d) $2\frac{7}{9} + 1\frac{2}{3} + 3\frac{5}{12}$

(e) $6\frac{3}{8} - 2\frac{5}{6} - 2\frac{1}{4}$

(f) $4\frac{3}{4} - 2\frac{1}{3} - 1\frac{3}{10}$

6. Evaluate the following.

(a) $3\frac{17}{18} + \left(4\frac{5}{6} - 1\frac{7}{9}\right)$

(b) $11\frac{7}{18} + \left(12\frac{5}{6} + 3\frac{7}{9}\right)$

(c) $3\frac{11}{12} - \left(4\frac{7}{9} - 5\frac{3}{8}\right)$

(d) $5\frac{8}{9} - \left(15\frac{13}{18} - 12\frac{5}{6}\right)$

(e) $12\frac{5}{6} + \left(5\frac{8}{9} - 9\frac{13}{18}\right)$

(f) $92\frac{8}{35} - \left(41\frac{3}{7} - 32\frac{17}{20}\right)$

1. Simplify the following.

(a) $\frac{5}{6} \times 14$

(b) $\frac{843}{100} \times 10$

(c) $\frac{19}{12} \times \frac{3}{38}$

(d) $\frac{105}{82} \times \frac{40}{7}$

(e) $\frac{2}{3} \times \frac{4}{5} \times \frac{7}{4}$

(f) $\frac{5}{4} \times \frac{12}{20} \times \frac{3}{7}$

2. Write down the reciprocal of each of the following.

(a) $\frac{3}{5}$

(b) $\frac{3}{8}$

(c) $\frac{7}{8}$

(d) $\frac{9}{10}$

(e) 5

(f) 10

(g) $\frac{5}{3}$

(h) 1

3. Simplify the following.

(a) $\frac{3}{5} \div 5$

(b) $39 \div \frac{26}{7}$

(c) $\frac{21}{12} \div \frac{19}{24}$

(d) $\frac{32}{17} \div \frac{11}{51}$

(e) $\frac{3}{4} \div \frac{5}{6} \div \frac{2}{15}$

(f) $\frac{3}{23} \div \frac{2}{15} \div \frac{30}{115}$

4. Simplify the following.

(a) $5\frac{1}{3} \times 5\frac{1}{4}$

(b) $4\frac{4}{5} \times 4\frac{3}{8}$

(c) $3\frac{3}{4} \times 1\frac{11}{15}$

(d) $2\frac{1}{2} \div 1\frac{2}{3}$

(e) $4\frac{2}{3} \div 11\frac{2}{3}$

(f) $7\frac{7}{8} \div 2\frac{3}{4}$

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5. Evaluate the following.

(a) $2\frac{1}{2} \times 3\frac{2}{5} \div \frac{4}{5}$

(b) $3\frac{1}{7} \div 2\frac{3}{4} \times \frac{3}{8}$

(c) $\frac{3}{4} \times \frac{5}{6} + 3 \times \frac{4}{3}$

(d) $\frac{1}{6} \div \frac{3}{4} \div \left(\frac{3}{8} \div \frac{1}{4}\right)$

(e) $\frac{7}{15} \div \frac{22}{12} \times \left(\frac{1}{6} + \frac{2}{3}\right)$

(f) $\frac{4}{7} \div \frac{1}{14} \times 2\frac{1}{2} + \frac{5}{2}$

*6. Evaluate the following.

(a) $\frac{3 \times 4 - 8}{18 \times 14}$

(b) $\frac{21 + 3^2}{18 \div 5}$

(c) $\frac{2 \times 3 - 3 \div 5}{6 \times 7 \div 2}$

(d) $\frac{4 \times 8 \div 2}{2 \times 5 - 3}$

(e) $\frac{5^3 - 14 \times 3}{24 \div 6 - 3}$

(f) $\frac{2 \times 3 - 1}{31 + 4 \times 3} - 2 \div \frac{3}{4}$

Exercise 2.4

answer on p. 420

1. Write down the answers when the following are multiplied by 10, 100 and 1 000.

(a) 0.11	(b) 0.012	(c) 8.001
(d) 95	(e) 101.35	(f) 5 683.053

2. Write down the answers when the following are divided by 10, 100 and 1 000.

(a) 71	(b) 100.51	(c) 0.017
(d) 0.008 4	(e) 7 088.4	(f) 452 063.25

3. Do the following additions.

(a) $0.76 + 29.93$	(b) $33.8 + 9.35$
(c) $28.32 + 32.099 + 1.32$	(d) $21.138 + 9.019 + 123.02$

4. Do the following subtractions.

(a) $82.72 - 61.83$	(b) $31.03 - 3.94$	(c) $13 - 0.13$
(d) $22 - 1.63$	(e) $46.34 - 19.003$	(f) $62.123 - 4.24$

5. Evaluate the following.

(a) $52.7 - 21.07 - 9.8$	(b) $32.1 + 4.26 - 20.07$
(c) $63.123 - 36.74 + 1.2$	(d) $78.007 - 3.26 + 1.713$

6. Do the following multiplications.

(a) 6.03×6	(b) 40.7×7	(c) 9.7×2.1
(d) 26.3×1.3	(e) $10.3 \times 5.3 \times 11.4$	(f) $36.4 \times 4.5 \times 3.9$

7. Do the following divisions.

(a) $46.5 \div 5$	(b) $13.14 \div 6$	(c) $32.2 \div 1.4$
(d) $57.5 \div 0.23$	(e) $10.56 \div 4.4 \div 48$	(f) $12.96 \div 3.6 \div 0.012$

8. Evaluate the following.

(a) $14.7 \div 1.2 \times (8.4 - 3.5)$	(b) $1.2 + 8.8 \div (0.05 \times 40)$
(c) $1.8^2 - 0.8^2 \times 3$	(d) $1.2^3 - 1.2^2 \div 1.2$
(e) $9.8 \div 1.4^2 \times 2.1$	(f) $9.8 \div 1.4 \times 1.4 \times 2.1$

Answers

Exercise 2.2 (p. 41)

1. (a) $\frac{5}{8}$ (b) $\frac{9}{22}$ (c) $\frac{47}{48}$
 (d) $\frac{4}{15}$ (e) $\frac{19}{60}$ (f) $\frac{19}{80}$
2. (a) $\frac{3}{8}$ (b) $\frac{1}{3}$ (c) $\frac{17}{30}$
 (d) $\frac{4}{15}$ (e) $\frac{13}{24}$ (f) $\frac{1}{2}$
3. (a) $3\frac{8}{15}$ (b) $3\frac{11}{20}$ (c) $1\frac{4}{15}$
 (d) $2\frac{1}{12}$ (e) $5\frac{51}{56}$ (f) $2\frac{8}{45}$
4. (a) $7\frac{4}{15}$ (b) $2\frac{2}{15}$ (c) $9\frac{31}{63}$
 (d) 7 (e) $3\frac{16}{75}$ (f) $4\frac{37}{42}$
5. (a) $3\frac{1}{12}$ (b) $3\frac{5}{8}$ (c) 5
 (d) $7\frac{31}{36}$ (e) $1\frac{7}{24}$ (f) $1\frac{7}{60}$
6. (a) 7 (b) 28 (c) $4\frac{37}{72}$
 (d) 3 (e) 9 (f) $83\frac{13}{20}$

Exercise 2.3 (p. 44)

1. (a) $11\frac{2}{3}$ (b) $84\frac{3}{10}$ (c) $\frac{1}{8}$
 (d) $7\frac{13}{41}$ (e) $\frac{14}{15}$ (f) $\frac{9}{28}$
2. (a) $\frac{5}{3}$ (b) $\frac{8}{3}$ (c) $\frac{8}{7}$
 (d) $\frac{10}{9}$ (e) $\frac{1}{5}$ (f) $\frac{1}{10}$
 (g) $\frac{3}{5}$ (h) 1
3. (a) $\frac{3}{25}$ (b) $10\frac{1}{2}$ (c) $2\frac{4}{19}$
 (d) $8\frac{8}{11}$ (e) $6\frac{3}{4}$ (f) $3\frac{3}{4}$
4. (a) 28 (b) 21 (c) $6\frac{1}{2}$
 (d) $1\frac{1}{2}$ (e) $\frac{2}{5}$ (f) $2\frac{19}{22}$

5. (a) $10\frac{5}{8}$ (b) $\frac{3}{7}$ (c) $4\frac{5}{8}$
 (d) $\frac{4}{27}$ (e) $\frac{7}{33}$ (f) $22\frac{1}{2}$
6. (a) $\frac{1}{63}$ (b) $8\frac{1}{3}$ (c) $\frac{9}{35}$
 (d) $2\frac{2}{7}$ (e) 83 (f) $-2\frac{71}{129}$

Exercise 2.4 (p. 49)

1. (a) 1.1, 11, 110 (b) 0.12, 1.2, 12
 (c) 80.01, 800.1, 8 001 (d) 950, 9 500, 95 000
 (e) 1 013.5, 10 135, 101 350
 (f) 56 830.53, 568 305.3, 568 305 3
2. (a) 7.1, 0.71, 0.071 (b) 10.051, 1.005 1, 0.100 51
 (c) 0.001 7, 0.000 17, 0.000 017
 (d) 0.000 84, 0.000 084, 0.000 008 4
 (e) 708.84, 70.884, 7.088 4
 (f) 452 06.325, 4 520.632 5, 452.06 325
3. (a) 30.69 (b) 43.15
 (c) 61.739 (d) 153.177
4. (a) 20.89 (b) 27.09 (c) 12.87
 (d) 20.37 (e) 27.337 (f) 57.883
5. (a) 21.83 (b) 16.29 (c) 27.583 (d) 76.46
6. (a) 36.18 (b) 284.9 (c) 20.37
 (d) 34.19 (e) 622.326 (f) 638.82
7. (a) 9.3 (b) 2.19 (c) 23
 (d) 250 (e) 0.05 (f) 300
8. (a) 60.025 (b) 5.6 (c) 1.32
 (d) 0.528 (e) 10.5 (f) 20.58

Exercise 2.5a (p. 52)

1. A: 4 cm, B: 4 cm
2. (a) 6 kg (b) 5 kg
3. (a) 30 ml (b) 50 ml
4. (a) (i) 451 470 (ii) 451 500
 (iii) 451 000 (iv) 450 000
 (b) (i) 675 900 (ii) 675 900
 (iii) 676 000 (iv) 680 000
 (c) (i) 872 600 (ii) 872 600
 (iii) 873 000 (iv) 870 000