Module 6

Section 1
  Practice 2

A) 1. 4   4. 1   7. 3
      2. 8   5. 6
      3. 9   6. 7

B) 8. 500   11. 12,000

     9. 80   12. 2000

              13. 100
    10. 1100

              16. 1145
c) 14. 100

    15. 341   17. 125, 391

                            21. 1420, 1425, 1429, 1432
D) 18.   18, 23, 39, 45

D)

19. 89, 91, 109, 111

20. 909, 932, 1087, 1139

22. 11098, 12071, 12131

23. 15298, 15309, 15356

E) 24. C

25. C

Practice 2.1

A) 1. 78

2. 100

3. 52

4. $55 \quad -19 \quad 36$

5. 190

6. $2386 \quad 1692 \quad 4078$

7. 43

8. $8500 \quad - 383 \quad 1117$

B) 9.
$$
\begin{array}{r}
20 \\
12 \\
+\ 33 \\
\hline
65
\end{array}
$$

10.
$$
\begin{array}{r}
245 \\
-131 \\
\hline
114
\end{array}
$$

11.
$$
\begin{array}{r}
30 \\
75 \\
+\ 75 \\
\hline
180
\end{array}
$$

20.
$$
\begin{array}{r}
3\ ^16 \\
44\overset{6\ 18}{\cancel{789}} \\
-13890 \\
\hline
30899
\end{array}
$$

12.
$$
\begin{array}{r}
^2{}^{17} \\
\cancel{378} \\
-\ 85 \\
\hline
293
\end{array}
$$

13.
$$
\begin{array}{r}
^1{}44 \\
238 \\
+101 \\
\hline
483
\end{array}
$$

14.
$$
\begin{array}{r}
^4\ ^{13}\ ^{15} \\
8\cancel{45} \\
-\ 89 \\
\hline
456
\end{array}
$$

15.
$$
\begin{array}{r}
2095 \\
+324 \\
\hline
2419
\end{array}
$$

16.
$$
\begin{array}{r}
1250 \\
-\ 350 \\
\hline
900
\end{array}
$$

17.
$$
\begin{array}{r}
^1{}^1 \\
10326 \\
+982 \\
\hline
11308
\end{array}
$$

18.
$$
\begin{array}{r}
^8\ ^{10} \\
15890 \\
705 \\
\hline
15185
\end{array}
$$

19.
$$
\begin{array}{r}
^1{}^1 \\
108755 \\
+2442 \\
\hline
111197
\end{array}
$$

C) 21. 56

22. C

24

+ 8
___
8 8

Lesson 2.2

A) 1. 121
   × 4
   ___
   4 64

2. 250
   × 4
   ___
   1000

3. 342
   × 8
   ___
   2 756

$$\begin{array}{r}13\\5\overline{)65}\\-5\\\hline 15\\-15\\\hline 0\end{array}$$

5. $\begin{array}{r}105\\7\overline{)735}\\-7\\\hline 035\\-35\\\hline 0\end{array}$

6. $\begin{array}{r}21\\9\overline{)189}\\-18\\\hline 09\end{array}$

7. 45
   × 30
   ___
   00
   1350
   ___
   1350

8. 165
   × 25
   ___
   825
   2100
   ___
   2725

9. 211
   × 6
   ___
   1266

10. $\begin{array}{r}28\\10\overline{)260}\\200\\\hline 0\end{array}$

11. $\begin{array}{r}15\\15\overline{)225}\\-15\\\hline 75\\-75\\\hline 0\end{array}$

12. $\begin{array}{r}6\\19\overline{)114}\\-114\\\hline 0\end{array}$

$$\frac{\begin{array}{r} 9 \\ \times\ 0 \end{array}}{}$$

$$\frac{\begin{array}{r} 2110 \\ \end{array}}{5376}$$

13.
$$\frac{\begin{array}{r} 30 \\ \times\ 5 \end{array}}{250}$$

16.
$$5\overline{)1004} \quad \text{20 R4}$$
$$\frac{-10}{004}$$

19.
$$20\overline{)10760} \quad \text{538}$$
$$\frac{-100}{76}$$
$$\frac{-60}{160}$$

14.
$$4\overline{)179} \quad \text{44 r3}$$
$$\frac{-16}{19}$$
$$\frac{-16}{3}$$

17. 25
$$\frac{\begin{array}{r} 3 > 6 \\ \times\ 2 \end{array}}{150}$$

20. 12
$$12$$
$$8 > 32$$
$$\times\ 4 > 24$$
$$\frac{360}{384}$$

15.
$$5 > 30$$
$$6$$
$$\frac{\times 10}{300}$$

18.
$$\frac{\begin{array}{r} 441 \\ 7452 \\ \times\ 9 \end{array}}{67068}$$

21.
$$12\overline{)144140} \quad 120\ \text{R8}$$
$$\frac{-144}{17}$$
$$\frac{-12}{20}$$
$$\frac{-12}{8}$$

c) 22.
$$
\begin{array}{r}
\overset{3}{16} \\
\times\ 6 \\
\hline
96
\end{array}
$$
Ⓓ

23.
$$
\begin{array}{r}
\overset{2}{15} \\
\times\ 5 \\
\hline
75
\end{array}
$$
Ⓒ

24. $25\overset{6}{12}$

Ⓑ

Practice 3.1

A)
1. 11
2. 45
3. 13
4. 1
5. 1
6. 10
7. -3
8. 13

9. -4
10. 2
11. -22
12. 32
13. -50
14. -11
15. 25
16. -35

17. $4-5-10 = -11$
18. $66-22 = 44-33 = 11$
19. $-8+18 = 10$
20. $95-20 = 75$
21. $9-5+8 = 12$
22. $-34+15+21 = 2$
23. $12-5+12-9-11 = -1$
24. $-27+14 = -13$

B) 25. B

26. 92 +12 -3 +6 -3 +13
    104 -3 +6 -3 +13
    99 + 6 -3 +13
    105 - 3 +13
    102 +13
    115

c

Practice 3.2

A) 1. 20   6. 3   11. -28
   2. -21   7. -3   12. -3
   3. -48   8. -5   13. -1
   4. 18   9. 2   14. -75
                  -5   15. 6

5. 50

10.

B) 16. -20

17. -300

18. 8

19. -5

10. 660

21. 12

22. -120

23. -5

24. -12

25. 20

26. -1

27. 0

c) 28. $\dfrac{(-3)(7)(-1)}{(3)(-1)}$

A

29. $\dfrac{8 \times 2}{8}$ c

30.   c

Practice 4

1) $4(3) - 2 + (6 + 4 \cdot 2)$

2) $\dfrac{16}{4^2} = 1$

$$12 - 2 + (6 + 8)$$
$$10 + 6 + 8 = 24$$

4) $-9 + 7 + 4 = 2$

3) $25 - (5 - 7)(2)$
$$25 - (-4) = 29$$

6) $5 \cdot 3 + 5$
$$20$$

5) $\dfrac{27}{3} - \dfrac{4}{2} = 9 - 2 = 7$

8) $(-8)(-4) + 7$
$$+8 + 7 = 56$$

7) $8 + 9 - 3 = 14$

9) $30 \div 3 \times 1 = 10$

10) $15 + 12 - 4 = 23$

11) $36 + 125 = 161$

12) $49 \div (7) + (23)$
$$7 + 23 = 30$$

13) $2\left((36) \cdot 5\right) = 360$

14) $(25 + 6 - 3) \div (7)$
$$28 \div 7 = 4$$

15) $150 - 4(4 \cdot (9))$

$= 150 - 4(36)$

$= 6$

B) 16. C   17. B   18. $22 + 6(9 \div 3(3))$

$22 + 6 = 28$

B

Practice 5

A) 1. 18   4. 95

2. 107   5. 7026

3. 423   6. 18

17. -91

B) 13. 11

14. -156

15. 156

16. 3

18. 0

19. 620

20. -7

c) 25. D   26. C   27. C   28. A.

Practice 7.

A) 1. 9   3. 3   5. 9   7. 125

2. 4   4. 1   6. 7   8. $\frac{1}{16}$

B) 9. 6561   12. 8000   15. 15.6   18. 23.2

10. 1296   13. 1   16. 10.9   19. 1

11. 12.2   14. $\frac{1}{16}$ 17. 7.5   20. 256

21. C   22. A

C.)

Practice 8.

A) 1. 2.3×10^3
   2. 4.2×10^{-4}
   3. 1.24×10^7

4. 1.432×10^{10}
5. 3.1×10^7
6. 9.5×10^{-3}

7. 5.6×10^{-7}
8. 1.5×10^{11}
9. 9.0×10^{-9}

B) 10. 0.0065173
    11. 3,700,000
    12. 469,000,000
    13. 0.000017

14. 0.0072
15. 916,000
16. 85,910,000
17. 0.00000956

C) 18. 2.35×10^4
   19. 0.000000001

20. 2,679,009,000
21. 3.0×10^8

D) 22. B   23. D

Practice 9.1

4. C   5. D   6. A   7. D

Practice 9.2

1. $34 + 69 = 143$ (D)   3. (B)

2. $10 + 8 = 18$ (B)   4. C

Practice 10.

A)   2. distance   3. time   4. price per unit

$d = rt$ $t = \frac{1}{t}$ $\frac{c}{n} = r$

5. cost   6. number of units

$c = nr$ $\frac{c}{r} = n$

                              200 mi   16) 3 hr

b) 7) $48

8) $36

9) $80

10) 3

11) $2

12) 180 mi

13) 2-

14) 1 hr

15) 90 mph

Section 2

Lesson 1

A)
1. 3.8
2. 6.0
3. 0.45
4. 0.667
5. 8.1
6. 2.714

B)
7. 0.45
8. 0.06
9. 4.68
10. 1.85
11. 1.029
12. 0.14

C) 13. 5.08, 5.6, 5.8, 5.802

14. $0.1136, 0.115, 0.1(1, 0.$

15. $4.52, 4.667, 4.8, 14.005$

16. $0.8, 0.8023, 0.803, 0.823$

0) 17. D   18. D

Practice 2.1

A)
1. $\begin{array}{r} 4.025 \\ +3.971 \\ \hline 7.996 \end{array}$

4. $\begin{array}{r} 8.\overset{9}{\cancel{0}}\overset{1}{\cancel{4}} \\ -2.19 \\ \hline 6.85 \end{array}$

7. $\begin{array}{r} 1\overset{6}{7}.\overset{12}{2}94 \\ -0.8 \\ \hline 16.494 \end{array}$

10. $\begin{array}{r} \overset{2}{3}.\overset{17}{8} \\ -2.905 \\ \hline 0.805 \end{array}$

2. $\begin{array}{r} 6.5 \\ +4.008 \\ \hline 10.508 \end{array}$

5. $\begin{array}{r} \overset{4}{6}.\overset{9}{8}\overset{10}{0}\cancel{0} \\ -1.074 \\ \hline 7.426 \end{array}$

8. $\begin{array}{r} \overset{1}{4}.07 \\ +1.047 \\ \hline 3.917 \end{array}$

11. $\begin{array}{r} 1\overset{3}{4}.\overset{16}{8}4 \\ -10.8 \\ \hline 3.84 \end{array}$

3. $\begin{array}{r} 2.8 \\ +9.46 \end{array}$

6. $\begin{array}{r} \cancel{8}\overset{7}{8}.\overset{9}{9}\overset{10}{\cancel{0}} \\ -7.89 \end{array}$

9. $\begin{array}{r} 1\overset{11}{7}.52 \\ 3.8 \\ \hline 21.32 \end{array}$

12. $\begin{array}{r} 100.\overset{4}{5}\overset{10}{7} \\ -98.15 \\ \hline 2.35 \end{array}$

12.26

2.11

B) 25)
7.2
6.8
+8.25

22.25   (A)

27) 2.8
+1.4

4.2

6
-4.2

1.8   (A)

Practice 2.2

A) 1.   5.3
×0.5
---
2 6 5
0 0 0

2.65

4.   .52
6) 3.12
-3.0

.12
-.12

0

7.   6.25
×1.4
---
2 5 0 0
0 0 0 0

25.00

10. 24.
1.25) 30.00
-25

50
-50

0

2.   6 4
×0.2
---
1 2 8
0 0 0

5.   3.6
8) 26.8
-24

4.8
-4.8

0

8.   13.5
×0.25
---
6 7 5
2 7 0 0
---
0 0 0 0 0

11. 14.6
2.8) 37.36
-28

117
-112

56
-56

3.
$$12.4$$
$$\times \ 0.04$$
$$\overline{\quad 496}$$
$$20 \ \ 0$$
$$\overline{\quad 0.496}$$
$$0.496$$

6.
$$\begin{array}{r} 4.09 \\ 5\overline{)20.45} \\ -20 \\ \hline 0.45 \\ -45 \\ \hline 0 \end{array}$$

9.
$$9.12$$
$$\times \ 1.005$$
$$\overline{\quad 4\ 8\ 1\ 0}$$
$$0\ 0\ 0\ 0$$
$$0\ 0\ 0\ 0\ 0$$
$$9\ 6\ 2\ \cdot 0\ \ 0$$
$$\overline{9.6681\ 0}$$

12.
$$\begin{array}{r} 15.800 \\ 0.003\overline{)47.400} \\ -3 \\ \hline 17 \\ -15 \\ \hline 24 \\ -24 \\ \hline 8 \end{array}$$

B) 26.
$$\begin{array}{r} 0.26 \\ 19\overline{)4.94} \\ -3.8 \\ \hline 1.14 \\ 1.14 \end{array}$$

(C) 26.
$$12.5$$
$$\times \ \ \ 4$$
$$\overline{\quad 50.0}$$
(B)

Practice 3

A) 1. $\dfrac{3}{5}$ 2. $\dfrac{2}{4}$ 3. $\dfrac{2}{3}$

B) 4. $1\frac{1}{3}$ 5. $3\frac{1}{2}$ 6. $3\frac{4}{4}$

C) 7. $5\frac{2}{3}$ 8. $\frac{16}{5}$ 9. 4 10. $\frac{47}{9}$

D) 19. $\frac{48}{60}$ 20. $\frac{15}{40}$ 21. $\frac{24}{100}$

E) 25. $\frac{13}{15}$ 26. $\frac{2}{3}$

F) 27. $\frac{18}{24} \rightarrow \frac{3}{4}$ (A)

28. (C)

Practice 4.1

B) 26. $\frac{5}{16} + \frac{14}{16} = \frac{19}{16} \rightarrow 1\frac{3}{16}$ (B)

27. $\frac{23}{8} - \frac{10}{8} = \frac{13}{8} \rightarrow 1\frac{5}{8}$ (C)

28. $\dfrac{186}{8} - \dfrac{71}{8} = \dfrac{115}{8} \rightarrow 14\dfrac{3}{8}$ Ⓐ

29. $\dfrac{5}{3} + \dfrac{1}{2} + \dfrac{3}{4}$

$\dfrac{20}{12} + \dfrac{6}{12} + \dfrac{9}{12} = \dfrac{35}{12} \rightarrow 2\dfrac{11}{12}$ Ⓒ

Practice 4.2

Ⓑ **19.** $400 \times \dfrac{3}{16} = \dfrac{1200}{16} = 75$ Ⓑ

70. $\dfrac{11}{4}$

$20 \times \dfrac{4}{11} = \dfrac{80}{11} = 7\dfrac{3}{11}$ Ⓑ

21.

$22 \times \dfrac{2}{3} = \dfrac{44}{3} \Rightarrow 14\dfrac{2}{3}$ Ⓐ

22. $\dfrac{101}{8} \times 3 = \dfrac{303}{8} = 37\dfrac{7}{8}$ Ⓒ

Practice 5.

1) $80 \times \frac{1}{4} = 20$ Ⓑ

2) Ⓒ

3) Ⓑ

4) $12 \times \frac{3}{2} = \frac{36}{2} = 18$ Ⓒ

5)
```
  1.875
- 1.125
_____
  0.750
```
Ⓑ

Practice 6.

1) Ⓒ

2) Ⓓ

5) 4.625
   ‾
6) 9.33

3) Ⓒ

4) $\dfrac{16}{24} = \dfrac{8}{12} = \boxed{\dfrac{2}{3}}$

7) $3\dfrac{1}{3}$

6) $11\dfrac{5}{2}$

Section 3

Practice 1.1

A) 1. $\dfrac{1}{4}$ 2. $\dfrac{1}{6}$ 3. 12   4. $\dfrac{2}{3}$ 5. 24

B) 10. Ⓐ   11. $\dfrac{180}{420} \rightarrow \dfrac{30}{70} = \dfrac{3}{7}$ Ⓐ

12. $\dfrac{150}{450} = \dfrac{1}{3}$ Ⓑ

Practice 1-2

A) 1. $x = 12$ 3. 2.5 5. $1484 = 4x$

   2. 45 4. 60 $x = 371$

B) 17. $\dfrac{0.98}{4} = \dfrac{x}{5}$ $4x = 4.9$

                                            $x = 1.23$ Ⓑ

    18. $\dfrac{5}{8} \stackrel{12}{\underset{?}{=}} \dfrac{60}{x}$ $8 \times 12 = 96$ Ⓒ

           $= 5$

    19.

           $\dfrac{414}{18} = 23$ Ⓑ