

Chapter 3 Review

(3.1) Add or subtract as indicated. Simplify your answers.

1. $\frac{7}{11} + \frac{3}{11}$

2. $\frac{4}{50} + \frac{2}{50}$

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

4. $\frac{4}{21} - \frac{1}{21}$

5. $\frac{4}{15} + \frac{3}{15} + \frac{2}{15}$

6. $\frac{3}{20} + \frac{7}{20} + \frac{2}{20}$

7. $\frac{1}{12} + \frac{11}{12}$

8. $\frac{3}{4} + \frac{1}{4}$

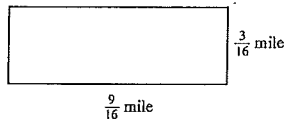
9. $\frac{11}{25} + \frac{6}{25} + \frac{2}{25}$

10. $\frac{4}{21} + \frac{1}{21} + \frac{11}{21}$

Solve.

11. One evening Mark Alorenzo did $\frac{3}{8}$ of his homework before supper, another $\frac{2}{8}$ of it while his children did their homework, and $\frac{1}{8}$ after his children went to bed. What part of his homework did he do that evening?

12. The Simpsons will be fencing in their land, which is in the shape of a rectangle. In order to do this, they need to find its perimeter. Find the perimeter of their land.



(3.2) Find the LCM of each list of numbers.

13. 5, 11

14. 20, 30

15. 20, 24

16. 16, 5

17. 12, 21, 63

18. 6, 8, 18

Write each fraction as an equivalent fraction with the given denominator.

19. $\frac{7}{8} = \frac{\quad}{64}$

20. $\frac{2}{3} = \frac{\quad}{30}$

21. $\frac{7}{11} = \frac{\quad}{33}$

22. $\frac{10}{13} = \frac{\quad}{26}$

23. $\frac{4}{15} = \frac{\quad}{60}$

24. $\frac{5}{12} = \frac{\quad}{60}$

(3.3) Add or subtract as indicated. Simplify your answers.

25. $\frac{7}{18} + \frac{2}{9}$

26. $\frac{4}{15} + \frac{1}{5}$

27. $\frac{4}{13} - \frac{1}{26}$

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

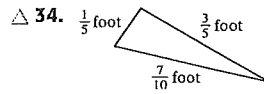
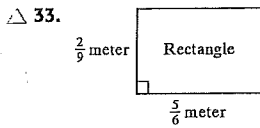
29. $\frac{1}{3} + \frac{9}{14}$

30. $\frac{7}{18} + \frac{5}{24}$

31. $\frac{11}{15} - \frac{4}{9}$

32. $\frac{9}{14} - \frac{3}{35}$

Find the perimeter of each figure.



35. Find the difference in length of two scarves if one scarf is $\frac{5}{12}$ of a yard long and the other is $\frac{2}{3}$ of a yard long.

36. Truman Kalzote cleaned $\frac{3}{5}$ of his house yesterday and $\frac{1}{10}$ of it today. How much of the house has been cleaned?

(3.4) Add or subtract as indicated. Simplify your answers.

37. $31\frac{2}{7} + 14\frac{10}{21}$

38. $24\frac{4}{5} + 35\frac{1}{5}$

39. $69\frac{5}{22} - 36\frac{7}{11}$

40. $36\frac{3}{20} - 32\frac{5}{6}$

41. $29\frac{2}{9}$
 $27\frac{7}{18}$
 $+ 54\frac{2}{3}$

42. $7\frac{3}{8}$
 $9\frac{5}{6}$
 $+ 3\frac{1}{12}$

43. $9\frac{3}{5}$
 $- 4\frac{1}{7}$

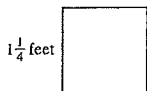
44. $8\frac{3}{11}$
 $- 5\frac{1}{5}$

Solve.

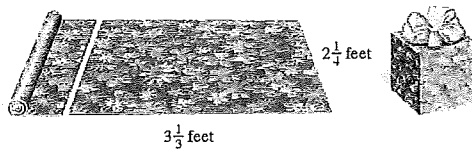
45. The average annual snowfall at a certain ski resort is $62\frac{3}{10}$ inches. Last year it had $54\frac{1}{2}$ inches. How many inches below average was last year's snowfall?

46. Dinah's homemade canned peaches contain $15\frac{3}{5}$ ounces per can. A can of Amy's brand contains $15\frac{5}{8}$ ounces per can. Amy's brand weighs how much more than Dinah's?

- △ 47. Find the perimeter of a sheet of shelf paper needed to fit exactly a square drawer $1\frac{1}{4}$ feet long on each side.



- △ 48. Find the perimeter of a rectangular sheet of gift wrap that is $2\frac{1}{4}$ feet by $3\frac{1}{3}$ feet.



(3.5) Insert $<$ or $>$ to form a true statement.

49. $\frac{5}{11}$ $\frac{6}{11}$

50. $\frac{4}{35}$ $\frac{3}{35}$

51. $\frac{5}{14}$ $\frac{16}{42}$

52. $\frac{6}{35}$ $\frac{17}{105}$

53. $\frac{7}{8}$ $\frac{6}{7}$

54. $\frac{7}{10}$ $\frac{2}{3}$

Evaluate each expression. Use the order of operations to simplify.

55. $\left(\frac{3}{7}\right)^2$

56. $\left(\frac{4}{5}\right)^3$

57. $\left(\frac{1}{2}\right)^4 \cdot \left(\frac{3}{5}\right)^2$

58. $\left(\frac{1}{3}\right)^2 \cdot \left(\frac{9}{10}\right)^2$

59. $\frac{5}{13} \div \frac{1}{2} \cdot \frac{4}{5}$

60. $\frac{8}{11} \div \frac{1}{3} \cdot \frac{11}{12}$

61. $\left(\frac{6}{7} - \frac{3}{14}\right)^2$

62. $\left(\frac{1}{3}\right)^2 - \frac{2}{27}$

63. $\frac{8}{9} - \frac{1}{8} \div \frac{3}{4}$

64. $\frac{9}{10} - \frac{1}{9} \div \frac{2}{3}$

65. $\frac{2}{7} \cdot \left(\frac{1}{5} + \frac{3}{10}\right)$

66. $\frac{9}{10} \div \left(\frac{1}{5} + \frac{1}{20}\right)$

67. $\left(\frac{3}{4} + \frac{1}{2}\right) \div \left(\frac{4}{9} + \frac{1}{3}\right)$

68. $\left(\frac{3}{8} - \frac{1}{16}\right) \div \left(\frac{1}{2} - \frac{1}{8}\right)$

69. $\frac{6}{7} \cdot \frac{5}{2} - \frac{3}{4} \cdot \frac{1}{2}$

70. $\frac{9}{10} \cdot \frac{1}{3} - \frac{2}{5} \cdot \frac{1}{11}$

Find the average of each list of fractions.

71. $\frac{2}{3}, \frac{5}{6}, \frac{1}{9}$

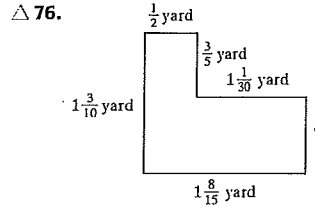
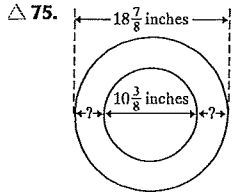
72. $\frac{4}{5}, \frac{9}{10}, \frac{3}{20}$

(3.6)

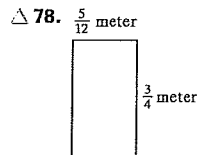
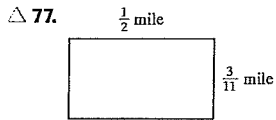
73. Saturn has 28 moons. The planet Uranus has only $\frac{3}{4}$ as many. Find the number of moons for Uranus.
(Source: NASA)

74. James Hardaway just bought $5\frac{7}{8}$ acres of land adjacent to the $9\frac{3}{4}$ acres he already owned. How much land does he now own?

Find the unknown measurements.



Find the perimeter and area of each rectangle. Attach the proper units to each. Remember that perimeter is measured in units and area is measured in square units.



Mixed Review

Find the LCM of each list of numbers.

79. 15, 30, 45

80. 6, 15, 20

Write each fraction as an equivalent fraction with the given denominator.

81. $\frac{5}{6} = \frac{\quad}{48}$

82. $\frac{7}{8} = \frac{\quad}{72}$

Add or subtract as indicated. Simplify your answers.

83. $\frac{5}{12} - \frac{3}{12}$

84. $\frac{3}{10} - \frac{1}{10}$

85. $\frac{2}{3} + \frac{1}{4}$

86. $\frac{5}{11} + \frac{2}{55}$

$$\begin{array}{r} 87. \quad 7\frac{3}{4} \\ +5\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 88. \quad 2\frac{7}{8} \\ +9\frac{1}{2} \\ \hline \end{array}$$

$$\begin{array}{r} 89. \quad 12\frac{3}{5} \\ -9\frac{1}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 90. \quad 32\frac{10}{21} \\ -24\frac{3}{7} \\ \hline \end{array}$$

Evaluate each expression. Use the order of operations to simplify.

$$91. \frac{2}{5} + \left(\frac{2}{5}\right)^2 - \frac{3}{25}$$

$$92. \frac{1}{4} + \left(\frac{1}{2}\right)^2 - \frac{3}{8}$$

$$93. \left(\frac{5}{6} - \frac{3}{4}\right)^2$$

$$94. \left(2 - \frac{2}{3}\right)^3$$

$$95. \frac{2}{3} \div \left(\frac{3}{5} + \frac{5}{3}\right)$$

$$96. \frac{3}{8} \cdot \left(\frac{2}{3} - \frac{4}{9}\right)$$

Insert $<$ or $>$ to form a true statement.

$$97. \frac{3}{14} \quad \frac{2}{3}$$

$$98. \frac{7}{23} \quad \frac{3}{16}$$

Solve.

99. Gregor Krowsky studied math for $\frac{3}{8}$ of an hour and geography for $\frac{1}{8}$ of an hour. How long did he study?

100. Two packages to be mailed weigh $3\frac{3}{4}$ pounds and $2\frac{3}{5}$ pounds. Find their combined weight.

101. A ribbon $5\frac{1}{2}$ yards long is cut from a reel of ribbon with 50 yards on it. Find the length of the piece remaining on the reel.

102. Linda Taneff has a board that is $10\frac{2}{3}$ feet in length. She plans to cut it into 5 equal lengths to use for a bookshelf. Find the length of each piece.

103. A recipe for pico de gallo calls for $1\frac{1}{2}$ tablespoons of cilantro. Five recipes will be made for a charity event. How much cilantro is needed?

104. Beryl Goldstein mixed $\frac{5}{8}$ of a gallon of water with $\frac{1}{8}$ of a gallon of punch concentrate. Then she and her friends drank $\frac{3}{8}$ of a gallon of the punch. How much of the punch was left?