

Summer Math Exercises

*For students who
are entering*

Pre-Algebra



It has been discovered that idle students lose learning over the summer months. To help you succeed next fall—and perhaps to help you learn some lessons that you did not learn the first time through—we have prepared the following packet of math exercises to be completed over the summer. It is clear that most students do not want to spend their entire summer doing math work. Based on how fast or slow you work, you may find that you only need to do math a few days a week. Working on this packet will be most effective if you do work throughout the summer so try not to skip weeks. You may use the following chart to get an idea of how often you might need to work problems:

Into Pre-Alg
Problems: [184](#)

<u>Min/Day</u>	<u>Min/Prob</u>	<u>Prob/Day</u>	<u>Sessions</u>
60	2	30	6
60	3	20	9
60	5	12	15
45	2	22.5	8
45	3	15	12
45	5	9	20
30	2	15	12
30	3	10	18
30	5	6	31

For example, if you work on math for 60 minutes per session and took 2 minutes per problem, you could complete 30 problems a day. That would equate to only about 6 sessions of working math problems over the summer. At the other end of the spectrum, if you want to work only 30 minutes each time and took on average 5 minutes to complete each problem, you would only get 6 problems done during a session and would have to do about 31 sessions to complete the work (i.e., math work about every other day during the summer break). Note that students who learned the material previously should not take more than an average of 5 minutes to work a problem.

This work is **MANDATORY** for CCA students. Please follow these guidelines:

- Complete the problems assigned on the next page.
- Bring the completed work to the **first day of classes** so you will get credit.
- Use PENCIL and **write legibly**.
- Please write your **answers in the answer blanks**. Also, use the graphs and tables provided to answer those questions.
- Do all your work on **separate sheets of paper**.

Round each number as directed.

1. 4179	Tens _____	Hundreds _____
	Tenths _____	Hundredths _____

2. 12,551	Hundreds _____	Thousands _____
	Hundredths _____	Thousandths _____

3. 12.775	_____	_____
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4. 0.0499	_____	_____
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Perform the indicated operations.

5. $1008 + 995 =$ _____

6. $89928 + 82 =$ _____

7. $9821 + 3920 =$ _____

8. $48811 + 17709 =$ _____

9. $1008 - 995 =$ _____

10. $89928 - 82 =$ _____

11. $9821 - 3920 =$ _____

12. $48811 - 17709 =$ _____

13. $7 + 8 + 12 + 6 + 29 =$ _____

14. $12 + 873 + 902 + 78 =$ _____

15. $59 \times 26 =$ _____

16. $109 \times 672 =$ _____

17. $88 \times 99 =$ _____

18. $992 \times 782 =$ _____

19. $2896 \div 8 =$ _____

20. $8938 \div 82 =$ _____

21. $72364 \div 316 =$ _____

22. $436455 \div 305 =$ _____

23. $8 \times 2 \times 5 \times 6 \times 9 =$ _____

24. $77 \times 12 \times 93 =$ _____

25. $87.307 + 2.98 =$ _____

26. $0.0421 + 1.78 =$ _____

27. $663.21 - 490.88 =$ _____

28. $10.269 - 9.8001 =$ _____

29. $23.98 \times 12.3 =$ _____

30. $9.002 \times 72 =$ _____

31. $902.2 \div 0.02 =$ _____

32. $78.455 \div 3.55 =$ _____

33. $12.4 + 89.2 + 60.7 =$ _____

34. $4.049 + 72.8 + 0.88 =$ _____

35. $17.1 \times 0.02 \div 3.8 =$ _____

36. $0.01 \times 0.02 \times 55 =$ _____

Round each number as directed.

37. 1100	Tens _____	Hundreds _____
	Tenths _____	Hundredths _____

38. 90,817	Hundreds _____	Thousands _____
	Hundredths _____	Thousandths _____

39. 99.009	_____	_____
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40. 9.5463	_____	_____
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Perform the indicated operations.

41. $5209 + 4283 =$ _____

42. $6091 + 998 =$ _____

43. $7922 + 6363 =$ _____

44. $49388 + 19553 =$ _____

45. $5209 - 4283 =$ _____

46. $6091 - 998 =$ _____

47. $7922 - 6363 =$ _____

48. $49388 - 19553 =$ _____

49. $27 + 16 + 8 + 21 + 3 =$ _____

50. $555 + 87 + 136 + 47 =$ _____

51. $78 \times 22 =$ _____

52. $328 \times 559 =$ _____

53. $62 \times 95 =$ _____

54. $737 \times 737 =$ _____

55. $8703 \div 9 =$ _____

56. $6815 \div 47 =$ _____

57. $55896 \div 274 =$ _____

58. $311168 \div 208 =$ _____

59. $4 \times 4 \times 7 \times 3 \times 7 =$ _____

60. $43 \times 18 \times 71 =$ _____

61. $0.0036 + 4.989 =$ _____

62. $8.88 + 44.818 =$ _____

63. $66.111 - 37.777 =$ _____

64. $21.001 - 12.97 =$ _____

65. $49.01 \times 68 =$ _____

66. $8.273 \times 66 =$ _____

67. $1000 \div 0.05 =$ _____

68. $87.291 \div 0.61 =$ _____

69. $77.6 + 0.8 + 33.46 =$ _____

70. $0.055 + 0.28 + 0.709 =$ _____

71. $70.5 \times 0.08 \div 25 =$ _____

72. $7.2 \times 0.08 \times 0.3 =$ _____

Write the fractions in lowest terms.

73. $\frac{4}{24} =$ _____ 74. $\frac{24}{60} =$ _____ 75. $\frac{66}{72} =$ _____ 76. $\frac{85}{95} =$ _____

Change to a mixed number in lowest terms.

77. $\frac{30}{8} =$ _____ 78. $\frac{76}{10} =$ _____ 79. $\frac{96}{18} =$ _____

Change each fraction to a decimal.

80. $\frac{1}{16} =$ _____ 81. $\frac{26}{8} =$ _____ 82. $\frac{18}{48} =$ _____

Change each decimal to a fraction in lowest terms.

83. 0.6 = _____ 84. 0.68 = _____ 85. 0.825 = _____

Which fraction is greater?

86. $\frac{7}{12}$ or $\frac{3}{5}$? _____ 87. $\frac{17}{20}$ or $\frac{8}{9}$? _____ 88. $\frac{29}{35}$ or $\frac{4}{5}$? _____

Express each percent as a fraction.

89. 60% = _____ 90. 8% = _____ 91. 2.5% = _____

Express each fraction as a percent.

92. $\frac{6}{40} =$ _____ 93. $\frac{9}{25} =$ _____ 94. $\frac{12}{5} =$ _____

Express each decimal as a percent.

95. 0.23 = _____
96. 1.92 = _____
97. 0.007 = _____

Express each percent as a decimal.

98. 88% = _____
99. 390% = _____
100. 4.3% = _____

Write the fractions in lowest terms.

101. $\frac{72}{96} =$ _____ 102. $\frac{35}{84} =$ _____ 103. $\frac{72}{116} =$ _____ 104. $\frac{4}{96} =$ _____

Change to a mixed number in lowest terms.

105. $\frac{40}{6} =$ _____ 106. $\frac{70}{12} =$ _____ 107. $\frac{33}{6} =$ _____

Change each fraction to a decimal.

108. $\frac{1}{8} =$ _____ 109. $\frac{90}{25} =$ _____ 110. $\frac{14}{560} =$ _____

Change each decimal to a fraction in lowest terms.

111. $0.75 =$ _____ 112. $1.2 =$ _____ 113. $0.0625 =$ _____

Which fraction is greater?

114. $\frac{8}{15}$ or $\frac{3}{5}$? _____ 115. $\frac{19}{21}$ or $\frac{8}{9}$? _____ 116. $\frac{7}{8}$ or $\frac{21}{23}$? _____

Express each percent as a fraction.

117. $20\% =$ _____ 118. $2\% =$ _____ 119. $37.5\% =$ _____

Express each fraction as a percent.

120. $\frac{18}{60} =$ _____ 121. $\frac{18}{8} =$ _____ 122. $\frac{1}{25} =$ _____

Express each decimal as a percent.

123. $0.81 =$ _____
124. $3.03 =$ _____
125. $0.025 =$ _____

Express each percent as a decimal.

126. $40\% =$ _____
127. $1000\% =$ _____
128. $0.6\% =$ _____

Perform the indicated operations.

$$129. \frac{2}{7} + \frac{4}{7} = \underline{\hspace{2cm}}$$

$$130. \frac{1}{4} + \frac{1}{2} = \underline{\hspace{2cm}}$$

$$131. \frac{1}{3} + \frac{1}{100} = \underline{\hspace{2cm}}$$

$$132. \frac{3}{8} + \frac{5}{12} = \underline{\hspace{2cm}}$$

$$133. \frac{8}{25} + \frac{3}{10} = \underline{\hspace{2cm}}$$

$$134. \frac{4}{21} + \frac{5}{14} = \underline{\hspace{2cm}}$$

$$135. \frac{7}{9} - \frac{4}{9} = \underline{\hspace{2cm}}$$

$$136. \frac{4}{5} - \frac{1}{2} = \underline{\hspace{2cm}}$$

$$137. \frac{7}{11} - \frac{1}{22} = \underline{\hspace{2cm}}$$

$$138. \frac{13}{20} - \frac{5}{12} = \underline{\hspace{2cm}}$$

$$139. \frac{9}{25} - \frac{3}{10} = \underline{\hspace{2cm}}$$

$$140. \frac{7}{12} - \frac{1}{16} = \underline{\hspace{2cm}}$$

$$141. \frac{2}{5} \times \frac{2}{7} = \underline{\hspace{2cm}}$$

$$142. \frac{3}{4} \times \frac{2}{9} = \underline{\hspace{2cm}}$$

$$143. \frac{10}{13} \times \frac{26}{45} = \underline{\hspace{2cm}}$$

$$144. \frac{3}{22} \times \frac{22}{63} = \underline{\hspace{2cm}}$$

$$145. \frac{4}{7} \times \frac{100}{101} = \underline{\hspace{2cm}}$$

$$146. \frac{21}{28} \times \frac{30}{70} = \underline{\hspace{2cm}}$$

$$147. \frac{1}{5} \div \frac{1}{2} = \underline{\hspace{2cm}}$$

$$148. \frac{4}{7} \div \frac{8}{9} = \underline{\hspace{2cm}}$$

$$149. \frac{5}{13} \div \frac{15}{26} = \underline{\hspace{2cm}}$$

$$150. \frac{7}{77} \div \frac{14}{22} = \underline{\hspace{2cm}}$$

$$151. \frac{50}{97} \div \frac{100}{61} = \underline{\hspace{2cm}}$$

$$152. \frac{28}{231} \div \frac{112}{77} = \underline{\hspace{2cm}}$$

$$153. 8 \frac{1}{2} + 1 \frac{5}{12} = \underline{\hspace{2cm}}$$

$$154. 5 \frac{2}{3} + 7 \frac{1}{12} = \underline{\hspace{2cm}}$$

$$155. 11 \frac{3}{5} - 4 \frac{1}{4} = \underline{\hspace{2cm}}$$

$$156. 9 \frac{3}{4} - 3 \frac{1}{8} = \underline{\hspace{2cm}}$$

Perform the indicated operations.

$$157. \frac{4}{9} + \frac{1}{9} = \underline{\hspace{2cm}}$$

$$158. \frac{1}{5} + \frac{4}{15} = \underline{\hspace{2cm}}$$

$$159. \frac{3}{25} + \frac{11}{200} = \underline{\hspace{2cm}}$$

$$160. \frac{2}{9} + \frac{7}{12} = \underline{\hspace{2cm}}$$

$$161. \frac{6}{25} + \frac{4}{15} = \underline{\hspace{2cm}}$$

$$162. \frac{1}{21} + \frac{5}{14} = \underline{\hspace{2cm}}$$

$$163. \frac{7}{11} - \frac{6}{11} = \underline{\hspace{2cm}}$$

$$164. \frac{7}{8} - \frac{1}{4} = \underline{\hspace{2cm}}$$

$$165. \frac{8}{11} - \frac{4}{33} = \underline{\hspace{2cm}}$$

$$166. \frac{17}{20} - \frac{5}{8} = \underline{\hspace{2cm}}$$

$$167. \frac{9}{10} - \frac{1}{4} = \underline{\hspace{2cm}}$$

$$168. \frac{23}{30} - \frac{1}{6} = \underline{\hspace{2cm}}$$

$$169. \frac{4}{9} \times \frac{15}{44} = \underline{\hspace{2cm}}$$

$$170. \frac{72}{81} \times \frac{6}{8} = \underline{\hspace{2cm}}$$

$$171. \frac{11}{19} \times \frac{11}{40} = \underline{\hspace{2cm}}$$

$$172. \frac{16}{33} \times \frac{22}{64} = \underline{\hspace{2cm}}$$

$$173. \frac{4}{77} \times \frac{99}{111} = \underline{\hspace{2cm}}$$

$$174. \frac{45}{50} \times \frac{25}{70} = \underline{\hspace{2cm}}$$

$$175. \frac{2}{7} \div \frac{1}{2} = \underline{\hspace{2cm}}$$

$$176. \frac{8}{21} \div \frac{8}{9} = \underline{\hspace{2cm}}$$

$$177. \frac{1}{27} \div \frac{15}{81} = \underline{\hspace{2cm}}$$

$$178. \frac{77}{99} \div \frac{27}{33} = \underline{\hspace{2cm}}$$

$$179. \frac{8}{5} \div \frac{100}{22} = \underline{\hspace{2cm}}$$

$$180. \frac{75}{51} \div \frac{125}{33} = \underline{\hspace{2cm}}$$

$$181. 2 \frac{1}{4} + 2 \frac{3}{10} = \underline{\hspace{2cm}}$$

$$182. 1 \frac{1}{3} + 9 \frac{5}{12} = \underline{\hspace{2cm}}$$

$$183. 20 \frac{3}{5} - 9 \frac{6}{35} = \underline{\hspace{2cm}}$$

$$184. 2 \frac{7}{8} - 1 \frac{1}{4} = \underline{\hspace{2cm}}$$