## 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

Min/Day	Min/Prob	Prob/Day	<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 Primary 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.

		Tens	Hundreds
1.	4179		
		Tenths	Hundredths

3. 12.775

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

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

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

Round each number as directed.

$$59. \quad 4 \times 4 \times 7 \times 3 \times 7 \quad = \underline{\hspace{1cm}}$$

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

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

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

Write the fractions in lowest terms.

$$\frac{73. \quad 4}{24} =$$

$$\frac{74.}{60} = \frac{75.}{60} = \frac{66}{72} = \frac{75.}{60} = \frac{66}{72}$$

Change to a mixed number in lowest terms.

$$\frac{77. \ 30}{8} =$$

Change each fraction to a decimal.

Change each decimal to a fraction in lowest terms.

85.

Which fraction is greater?

86. 
$$\frac{7}{12}$$
 or  $\frac{3}{5}$ 

87. 
$$\frac{17}{20}$$
 or  $\frac{8}{9}$ ?

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.

Express each fraction as a percent.

$$\frac{93. \ 9}{25} =$$

Express each decimal as a percent.

Express each percent as a decimal.

Write the fractions in lowest terms.

$$\frac{101.}{96} =$$

$$\frac{104}{96} =$$

Change to a mixed number in lowest terms.

$$\frac{105. \quad 40}{6} =$$

$$\frac{106.}{12} =$$

$$\frac{107. \ \ 33}{6} =$$

Change each fraction to a decimal.

$$\frac{109.}{25} =$$

Change each decimal to a fraction in lowest terms.

Which fraction is greater?

114. 
$$\frac{8}{15}$$
 or  $\frac{3}{5}$ ?

115. 
$$19 \text{ or } \frac{8}{9}$$
?

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.

Express each fraction as a percent.

Express each decimal as a percent.

Express each percent as a decimal.

$$\frac{129.}{7} + \frac{4}{7} =$$

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

$$\frac{131.}{3} + \frac{1}{100} =$$

$$\frac{132.}{8} + \frac{5}{12} =$$

$$\frac{133.}{25} + \frac{3}{10} =$$

$$\frac{134.}{21} + \frac{5}{14} =$$

$$\frac{135.}{9} - \frac{4}{9} =$$

$$\frac{136.}{5} - \frac{1}{2} =$$

$$\frac{137.}{11} - \frac{1}{22} =$$

$$\frac{138. \ \, 13}{20} - \frac{5}{12} =$$

$$\frac{139.}{25} - \frac{3}{10} =$$

$$\frac{140.}{12} - \frac{1}{16} =$$

$$\frac{141. \quad 2}{5} \times \frac{2}{7} =$$

$$\frac{142.}{4} \times \frac{2}{9} =$$

$$\frac{143. \ \ 10}{13} \times \frac{26}{45} =$$

$$\frac{144.}{22} \times \frac{22}{63} =$$

$$\frac{145. - 4}{7} \times \frac{100}{101} =$$

$$\frac{146. \quad 21}{28} \times \frac{30}{70} =$$

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

$$\frac{148.}{7} \div \frac{8}{9} =$$

$$\frac{149.}{13} \div \frac{15}{26} =$$

$$\frac{150.}{77} \div \frac{14}{22} =$$

$$\frac{151.}{97} \div \frac{100}{61} =$$

$$\frac{152.}{231} \div \frac{112}{77} = \underline{\hspace{1cm}}$$

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

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

155. 
$$11\frac{3}{5} - 4\frac{1}{4} =$$

156. 
$$9\frac{3}{4} - 3\frac{1}{8} =$$

$$\frac{157.}{9} + \frac{1}{9} =$$

$$\frac{158.}{5} + \frac{4}{15} =$$

$$\frac{159.}{25} + \frac{11}{200} = \underline{\hspace{1cm}}$$

$$\frac{160. - 2}{9} + \frac{7}{12} = \underline{\hspace{1cm}}$$

$$\frac{161.}{25} + \frac{4}{15} =$$

$$\frac{162.}{21} + \frac{5}{14} =$$

$$\frac{163.}{11} - \frac{6}{11} =$$

$$\frac{164.}{8} - \frac{1}{4} =$$

$$\frac{165. \frac{8}{11} - \frac{4}{33}}{} =$$

$$\frac{166. \ \, 17}{20} - \frac{5}{8} =$$

$$\frac{167. \quad 9}{10} - \frac{1}{4} =$$

$$\frac{168. \ \ 23}{30} - \frac{1}{6} =$$

$$\frac{169. \quad 4}{9} \times \frac{15}{44} =$$

$$\frac{170.}{81} \times \frac{6}{8} =$$

$$\frac{16}{33} \times \frac{22}{64} =$$

$$\frac{173. \quad 4}{77} \times \frac{99}{111} =$$

$$\frac{174.}{50} \times \frac{25}{70} =$$

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

$$\frac{176.}{21} \div \frac{8}{9} =$$

$$\frac{177.}{27} \div \frac{15}{81} =$$

$$\frac{178.}{99} \div \frac{27}{33} =$$

$$\frac{179.}{5} \div \frac{100}{22} =$$

$$\frac{180.}{51} \div \frac{125}{33} =$$

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

182. 
$$1\frac{1}{3} + 9\frac{5}{12} =$$

183. 
$$20\frac{3}{5} - 9\frac{6}{35} =$$

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