

Summer Work Assignment

Your Schoology Code: 4S28-KJ8H-FBSZM

Happy summer!! I hope you all take time to relax and have some fun over your break. While it is so important to have fun it also important to keep your basic math skills sharp for the 2020 school year. Attached you will find the details for completing your math summer assignment.

- ALL pages are **due** no later than **Friday, SEPTEMBER 11th BY 4:00 pm**
- The assignment must be submitted in Schoology in its entirety. Please DO NOT submit pages separately. You must submit answer sheet and written work.
- Each day the assignment is late 5 points will be deducted from your grade
- The assignment **WILL NOT** be accepted past September 15th ***I am very firm on not accepting assignments past 9/15. I give plenty of time to complete the work and even give the whole first week back to school to complete it. There are NO EXSCUSES***
- All work must be shown to get credit for the assignment. This work may be completed on scratch paper but, **MUST BE NUMBERED AND NEAT.**
- Please submit final answers on the answer sheet provided.
- If you are unable to submit the assignment through Schoology you may hand in a hard copy no later than **Friday, SEPTEMBER 11TH during your class period.**

THIS IS ASSIGNMENT WILL BE COUNTED AS A QUIZ GRADE

Name: _____

ANSWER SHEET

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Addition & Subtraction of Fractions & Mixed Numbers

Adding & Subtracting Fractions

1. Find a common denominator.
2. Add or subtract the two numerators and keep the denominator the same.
3. Simplify the answer and/or change improper fraction answers to mixed numbers.

ex: $\frac{1}{3} + \frac{1}{6}$

$$\begin{array}{r} \frac{1}{3} \times \frac{2}{2} = \frac{2}{6} \\ + \frac{1}{6} \times \frac{1}{1} = \frac{1}{6} \\ \hline \frac{3}{6} \div \frac{3}{3} = \frac{1}{2} \end{array}$$

Adding Mixed Numbers

1. Find a common denominator.
2. Add the two numerators and keep the denominator the same.
3. Add the whole numbers.
4. Simplify the answer and/or change improper fraction answers to mixed numbers.

ex: $2\frac{3}{4} + 1\frac{2}{3}$

$$\begin{array}{r} 2\frac{3}{4} = 2\frac{9}{12} \\ + 1\frac{2}{3} = 1\frac{8}{12} \\ \hline 3\frac{17}{12} = 4\frac{5}{12} \end{array}$$

Subtracting Mixed Numbers

1. Find a common denominator.
2. Subtract the two numerators and keep the denominators the same. If the top numerator is smaller than the bottom numerator, borrow from the whole number and rename the top fraction.
3. Subtract the whole numbers
4. Simplify the answer.

ex: $3\frac{1}{4} - 1\frac{1}{3}$

$$\begin{array}{r} 3\frac{1}{4} = 2\frac{3}{12} + \frac{12}{12} = 2\frac{15}{12} \\ - 1\frac{1}{3} = 1\frac{4}{12} \\ \hline 1\frac{11}{12} \end{array}$$

Find the sum. Write your answer in simplest form.

1. $\frac{1}{4} + \frac{1}{2}$	2. $\frac{2}{5} + \frac{1}{3}$	3. $\frac{7}{15} + \frac{3}{10}$	4. $\frac{11}{28} + \frac{4}{7}$
5. $\frac{3}{4} + \frac{1}{12}$	6. $\frac{9}{10} + \frac{13}{20}$	7. $4\frac{15}{16} + 7\frac{3}{4}$	8. $2\frac{16}{25} + 3\frac{18}{20}$
9. $3\frac{2}{5} + 9\frac{1}{10}$	10. $6\frac{1}{42} + 4\frac{5}{6}$	11. $18\frac{7}{9} + 16$	12. $4\frac{7}{8} + \frac{1}{3}$

Find the difference. Write your answer in simplest form.

13. $\frac{7}{8} - \frac{1}{4}$	14. $\frac{13}{15} - \frac{1}{3}$	15. $\frac{7}{9} - \frac{2}{6}$	16. $\frac{21}{24} - \frac{3}{8}$
17. $\frac{3}{14} - \frac{1}{7}$	18. $\frac{9}{10} - \frac{1}{2}$	19. $9 - 4\frac{1}{12}$	20. $12\frac{18}{25} - 8\frac{4}{5}$
21. $5\frac{8}{9} - 3\frac{2}{3}$	22. $8\frac{12}{16} - 7\frac{31}{32}$	23. $10\frac{3}{4} - 6\frac{4}{5}$	24. $13\frac{7}{8} - \frac{10}{12}$

Multiplication & Division of Fractions & Mixed Numbers

Multiplying Fractions & Mixed Numbers

1. Turn any mixed numbers and whole numbers into improper fractions.
2. Cross-simplify if possible.
3. Multiply the numerators and then multiply the denominators
4. Simplify the answer and/or change improper fraction answers to mixed numbers.

$$\text{ex: } 2\frac{1}{4} \cdot \frac{1}{3}$$

$$\frac{\overset{3}{\cancel{3}}}{\underset{4}{\cancel{4}}} \cdot \frac{1}{\underset{3}{\cancel{3}}_1} = \boxed{\frac{3}{4}}$$

Dividing Fractions & Mixed Numbers

1. Turn any mixed numbers and whole numbers into improper fractions.
2. Keep the first fraction the same, change the division to multiplication, and flip the second fraction to its reciprocal.
3. Multiply the fractions.
4. Simplify the answer and/or change improper fraction answers to mixed numbers.

$$\text{ex: } 7 \div 1\frac{3}{4}$$

$$\frac{7}{1} \div \frac{7}{4} \\ \downarrow \\ \frac{\overset{1}{\cancel{7}}}{1} \cdot \frac{4}{\underset{7}{\cancel{7}}_1} = \frac{4}{1} = \boxed{4}$$

Find the product. Write your answer in simplest form.

25. $\frac{1}{8} \cdot \frac{1}{7}$	26. $\frac{2}{9} \cdot \frac{12}{14}$	27. $\frac{7}{12} \cdot \frac{8}{14}$	28. $\frac{9}{24} \cdot \frac{16}{81}$
29. $\frac{3}{14} \cdot \frac{21}{33}$	30. $\frac{1}{2} \cdot \frac{9}{13}$	31. $2\frac{1}{6} \cdot \frac{3}{5}$	32. $8\frac{4}{5} \cdot 1\frac{5}{11}$
33. $2\frac{1}{2} \cdot \frac{2}{5}$	34. $9\frac{2}{3} \cdot 6$	35. $13\frac{1}{3} \cdot 2\frac{1}{10}$	36. $7 \cdot \frac{1}{3}$

Find the quotient. Write your answer in simplest form.

37. $\frac{5}{6} \div \frac{1}{4}$	38. $\frac{1}{2} \div \frac{1}{4}$	39. $\frac{3}{4} \div \frac{9}{12}$	40. $\frac{21}{35} \div \frac{7}{25}$
41. $\frac{6}{7} \div 3$	42. $\frac{2}{11} \div \frac{1}{33}$	43. $1\frac{1}{4} \div 2\frac{1}{3}$	44. $5\frac{3}{6} \div 3$
45. $10\frac{1}{4} \div \frac{2}{5}$	46. $3\frac{2}{3} \div 1\frac{1}{7}$	47. $4\frac{3}{8} \div \frac{9}{10}$	48. $8 \div \frac{3}{4}$

Operations with Decimals

Adding & Subtracting Decimals

1. Write the problem vertically, lining up the decimal points.
2. Add additional zeroes at the end, if necessary, to make the numbers have the same number of decimal places.
3. Add/subtract as if the numbers are whole numbers
4. Bring the decimal point straight down

ex: $10.03 + 5.2$

$$\begin{array}{r} 10.03 \\ + 5.20 \\ \hline 15.23 \end{array}$$

Multiplying Decimals

1. Write the problem vertically with the numbers lined up to the right. The decimal points do NOT need to be lined up.
2. Ignore the decimals and multiply as if the numbers are whole numbers.
3. Count the total number of decimal places in the factors and put a decimal point in the product so that it has that same number of decimal places.

ex: 1.03×2.8

$$\begin{array}{r} 1.03 \rightarrow 2 \text{ decimal places} \\ \times 2.8 \rightarrow 1 \text{ decimal place} \\ \hline 824 \\ + 2060 \\ \hline 2884 \end{array} \rightarrow \begin{array}{r} 3 \text{ decimal places} \\ \downarrow \\ 2.884 \end{array}$$

Dividing Decimals

1. Write the dividend under the long division symbol and the divisor to the left of it.
2. Move the decimal point in the divisor after the number to turn it into a whole number and then move the decimal in the dividend the same number of places. Then bring it up.
3. Divide as if the numbers are both whole numbers.
4. Annex zeros in the dividend as needed until there is no remainder. If your answer is a repeating decimal, write the answer using bar notation.

ex: $25.3 \div 0.3$

$$\begin{array}{r} 84.\bar{3} \\ 0.3 \overline{) 25.30} \\ \underline{-24} \\ 13 \\ \underline{-12} \\ 10 \\ \underline{-9} \\ 1 \end{array}$$

Find the sum or difference.

49. $6.2 + 3.4$	50. $8.04 - 6.8$	51. $12.4 + 0.899$	52. $12.9 - 2.043$
53. $163.29 + 13.987$	54. $13 - 6.7$	55. $3.91 + 1.93$	56. $34.2 - 29.027$

Find the product.

57. $9.2 \cdot 3.1$	58. $(14.1)(2.7)$	59. 91×4.5	60. 82.04×1.2
61. $(1.1)(6.78)$	62. $45 \cdot 0.1$	63. 0.010×13.9	64. $(2.34)(5.6)$

Find the quotient.

65. $8.4 \div 2$	66. $1.56 \div 1.3$	67. $7.45 \div 2$	68. $9 \div 0.8$
69. $68 \div 3.4$	70. $9.4 \div 0.2$	71. $0.045 \div 0.15$	72. $4 \div 0.3$