May 2024

UPPER SCHOOL SUMMER MATH
All Rising 6th Grade
Pre-Algebra Readiness Packet

Dear Upper School Students,

This summer, we encourage you to continue to foster a belief in the importance and enjoyment of mathematics at home. Being actively involved in mathematical activities enhances learning.

In preparation for the 2024-2025 school year, each student entering middle school is required to complete a summer math review packet. Each packet focuses on the prerequisite concepts and skills necessary for student success in each math class. The topics within this packet are important foundational concepts. READ THE INSTRUCTIONS. Even if it doesn't say "Show Your Work" at the top of the page, **you are expected to show your work on all pages.** If you need extra space, you must use and attach scratch paper to the back of the packet.

Please bring your completed math packet (with scratch work attached) with you on the first day of school in August. Your math teachers will be collecting them, and the packets will be graded for timeliness and thoroughness of completion.

Have a wonderful summer!

The Middle School Mathematics Department

Converting Decimals to Fractions

Name: _____ Date: _____

Convert each decimal to a fraction.

$0.75 =$	$0.5 =$
$0.1 =$	$0.9 =$
$0.35 =$	$0.125 =$
$0.6 =$	$0.625 =$
$0.3 =$	$0.85 =$
$0.45 =$	$0.375 =$
$0.4 =$	$0.7 =$
$0.25 =$	$0.8 =$
$0.15 =$	$0.65 =$
$0.2 =$	$0.55 =$

Adding Decimals to Hundredths

Calculate each sum.

$8.32 + 3.92 =$

$7.45 + 2.23 =$

$9.86 + 8.36 =$

$4.43 + 1.22 =$

$3.97 + 1.13 =$

$7.49 + 1.59 =$

$7.95 + 3.84 =$

$6.55 + 2.06 =$

$7.51 + 3.11 =$

$7.10 + 5.53 =$

$3.89 + 1.28 =$

$7.81 + 7.39 =$

$5.31 + 5.10 =$

$8.86 + 3.90 =$

$9.61 + 8.67 =$

$5.47 + 2.43 =$

$3.76 + 3.08 =$

$8.85 + 3.29 =$

$8.39 + 5.49 =$

$6.03 + 1.33 =$

Subtracting Decimals

Calculate each difference.

$5.8 - 1.8 =$

$35.4 - 24.4 =$

$43.8 - 32.41 =$

$4.47 - 1.57 =$

$7.93 - 5.4 =$

$63.5 - 5.3 =$

$70.92 - 2.25 =$

$36.02 - 1.1 =$

$98.5 - 7.9 =$

$71.2 - 9.79 =$

$13.9 - 8.58 =$

$45.74 - 8.97 =$

$25.1 - 9.72 =$

$65.48 - 6.1 =$

$72.17 - 7.5 =$

$22.7 - 8.1 =$

$47.34 - 7.43 =$

$25.4 - 5.53 =$

$96.3 - 65.7 =$

$20.18 - 2.9 =$

Multiplying Various Decimals by 2-Digit Hundredths

Name: _____ Date: _____

Calculate each product.

68.8×0.92	522×0.93	1.5×0.40	524×0.98	9.9×0.19
22.9×0.22	665×0.82	84.2×0.74	9.51×0.44	1.21×0.88
6.13×0.11	373×0.58	77×0.25	20.0×0.40	0.064×0.16
19.2×0.92	10.4×0.51	1.51×0.38	807×0.28	0.573×0.70
54×0.37	0.048×0.56	0.90×0.54	4.26×0.90	0.022×0.32

Dividing Decimals

Find each quotient.

$0.2\overline{)1.64}$ $0.3\overline{)1.65}$ $0.2\overline{)0.5}$ $0.6\overline{)0.84}$

$0.9\overline{)7.02}$ $0.1\overline{)0.85}$ $0.5\overline{)1.5}$ $0.7\overline{)3.01}$

$0.2\overline{)0.56}$ $0.4\overline{)3.32}$ $0.9\overline{)1.44}$ $0.6\overline{)4.86}$

Adding Fractions

Name: _____ Date: _____

Add each pair of fractions, simplify and write as a mixed fraction.

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

Subtracting Fractions

Find the value of each expression in lowest terms.

1. $\frac{35}{18} - \frac{16}{9}$

2. $\frac{5}{2} - \frac{39}{20}$

3. $\frac{19}{7} - \frac{37}{14}$

4. $\frac{20}{19} - \frac{15}{19}$

5. $\frac{20}{7} - \frac{17}{7}$

6. $\frac{37}{15} - \frac{11}{5}$

7. $\frac{17}{6} - \frac{5}{2}$

8. $\frac{13}{18} - \frac{1}{3}$

9. $\frac{4}{3} - \frac{2}{3}$

10. $\frac{37}{16} - \frac{3}{2}$

11. $\frac{13}{5} - \frac{38}{15}$

12. $\frac{13}{10} - \frac{1}{2}$

Multiplying Fractions

Name: _____ Date: _____

Multiply and simplify.

1. $\frac{5}{7} \times \frac{4}{5} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
2. $\frac{7}{9} \times \frac{6}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
3. $\frac{3}{5} \times \frac{5}{9} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
4. $\frac{2}{7} \times \frac{3}{8} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
5. $\frac{1}{6} \times \frac{2}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
6. $\frac{2}{3} \times \frac{1}{8} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
7. $\frac{1}{9} \times \frac{3}{4} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
8. $\frac{6}{7} \times \frac{8}{9} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
9. $\frac{1}{3} \times \frac{6}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
10. $\frac{1}{3} \times \frac{3}{8} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
11. $\frac{2}{3} \times \frac{1}{4} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
12. $\frac{5}{9} \times \frac{3}{5} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
13. $\frac{3}{5} \times \frac{2}{3} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
14. $\frac{4}{5} \times \frac{3}{4} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
15. $\frac{1}{6} \times \frac{2}{3} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
16. $\frac{1}{8} \times \frac{2}{3} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
17. $\frac{6}{7} \times \frac{1}{2} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
18. $\frac{1}{6} \times \frac{3}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
19. $\frac{5}{8} \times \frac{8}{9} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$
20. $\frac{5}{6} \times \frac{4}{7} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

Dividing Fractions

Find the value of each expression in lowest terms.

1. $\frac{1}{5} \div \frac{2}{3}$

2. $\frac{1}{3} \div \frac{7}{10}$

3. $\frac{1}{2} \div \frac{2}{3}$

4. $\frac{1}{5} \div \frac{2}{7}$

5. $\frac{1}{3} \div \frac{3}{4}$

6. $\frac{2}{9} \div \frac{3}{4}$

7. $\frac{1}{3} \div \frac{3}{4}$

8. $\frac{1}{7} \div \frac{1}{5}$

9. $\frac{4}{9} \div \frac{1}{2}$

10. $\frac{1}{4} \div \frac{7}{9}$

11. $\frac{3}{7} \div \frac{5}{9}$

12. $\frac{1}{4} \div \frac{8}{9}$

Plotting Coordinate Points

Plot the coordinate points below.

(4, -3)	(-7, 3)	(-5, -1)	(7, 9)	(-2, 1)	(-7, -1)	(7, -2)	(-4, 1)
(-7, 0)	(-5, -5)	(6, -7)	(5, 6)	(3, 3)	(8, -6)	(8, -5)	(-7, 7)