

**Metamora Grade School
Junior High Math Team**

Summer 2017, 6th grade going into 7th grade

Dear Parents and Students,

Mathematics is a discipline that constantly builds on previous knowledge. Students entering the next grade level will be expected to recall and apply the material they learned in their previous math class. To help ensure the student is prepared for the next grade level, packets and online GoMath activities at my.hrw.com have been provided. Please take some time this summer to utilize either resource for retention of the fundamental math concepts.

It is very important for students to be fluent with addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals. We suggest that when you do these problems or activities do not use a calculator.

You can find the packet for each grade level on the school website. If you lose your username and password, please contact Mrs. Amy Ernenputsch at aernenpu@schools.mtco.com.

Thank you and have a great summer doing and enjoying math,

Junior High Math Team

Mrs. Molly Gualandri; mgualand@schools.mtco.com

Mrs. Beth Wiley; bwiley@schools.mtco.com

Mrs. Amy Ernenputsch; aernenpu@schools.mtco.com

GoMath Username: _____

GoMath Password: _____

Name _____ Date _____

5A

BASIC SKILLS**Fractions: GCF and Simplifying**

Write the factors of 12: _____

Write the factors of 18: _____

The common factors of 12 and 18 are: _____

The GCF of 12 and 18 is _____

Complete the chart.

Numbers	Factors	Common Factors	Greatest Common Factor
1. 6 and 16			
2. 15 and 24			
3. 10 and 20			
4. 12 and 15			

Simplify the fraction.

5. $\frac{8}{12} =$ _____

6. $\frac{6}{18} =$ _____

7. $\frac{20}{30} =$ _____

8. $\frac{8}{24} =$ _____

9. $\frac{18}{24} =$ _____

10. $\frac{16}{20} =$ _____

11. $\frac{2}{6} =$ _____

12. $\frac{3}{12} =$ _____

13. $\frac{9}{27} =$ _____

14. $\frac{6}{18} =$ _____

15. $\frac{7}{21} =$ _____

16. $\frac{10}{20} =$ _____

Name _____ Date _____

5B

BASIC SKILLS**Fractions: GCF and Simplifying**

Complete the chart. Find the Greatest Common Factor (GCF) of the two numbers.

Numbers		Factors	Common Factors	GCF
1. 15 and 9	15:			
	9:			
2. 9 and 6	9:			
	6:			
3. 8 and 4	8:			
	4:			
4. 6 and 12	6:			
	12:			

Write the greatest common factor.

5. 21 and 24 _____

6. 15 and 25 _____

7. 7 and 28 _____

8. 14 and 21 _____

9. 18 and 9 _____

10. 12 and 11 _____

11. 6 and 36 _____

12. 20 and 25 _____

13. 2 and 10 _____

Write in simplest form.

14. $\frac{3}{15} =$ _____

15. $\frac{2}{8} =$ _____

16. $\frac{6}{12} =$ _____

17. $\frac{14}{35} =$ _____

18. $\frac{20}{30} =$ _____

19. $\frac{8}{16} =$ _____

20. $\frac{2}{4} =$ _____

21. $\frac{3}{21} =$ _____

Follow these steps to add or subtract fractions with different denominators.

- Write the fractions with the same denominator.

Add: $\frac{1}{3} + \frac{1}{6}$
 $\frac{2}{6} + \frac{1}{6}$

Subtract: $\frac{11}{12} - \frac{1}{6}$
 $\frac{11}{12} - \frac{2}{12}$

- Add or subtract the numerators.

$$\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$$

$$\frac{11}{12} - \frac{2}{12} = \frac{9}{12}$$

- Simplify the fraction.

$$\frac{3}{6} = \frac{1}{2}$$

$$\frac{9}{12} = \frac{3}{4}$$

Adding and Subtracting Mixed Numbers

Follow these steps to add or subtract mixed numbers with different denominators.

- Write the equivalent fractions with the LCD.

Add: $2\frac{2}{5} + 1\frac{3}{4}$
 $2\frac{8}{20} + 1\frac{15}{20}$

Subtract: $4\frac{1}{3} - 2\frac{5}{6}$
 $4\frac{2}{6} - 2\frac{5}{6}$

- Rename, if necessary.

$$4\frac{2}{6} = 3 + 1\frac{2}{6} = 3\frac{8}{6}$$

- Add or subtract the whole numbers.
Add or subtract the fractions.

$$2\frac{8}{20} + 1\frac{15}{20} = 3\frac{23}{20}$$

$$3\frac{8}{6} - 2\frac{5}{6} = 1\frac{3}{6}$$

- Simplify.

$$3\frac{23}{20} = 4\frac{3}{20}$$

$$1\frac{3}{6} = 1\frac{1}{2}$$

Multiplying Fractions and Mixed Numbers

Follow these steps to multiply fractions and mixed numbers.

- Write the mixed numbers as improper fractions if necessary.

Multiply: $\frac{3}{4} \cdot \frac{2}{5}$

Multiply: $2\frac{2}{3} \cdot 1\frac{5}{8}$

$$\frac{8}{3} \cdot \frac{13}{8}$$

- Multiply numerators.
Multiply denominators.

$$\frac{3 \cdot 2}{4 \cdot 5} = \frac{6}{20}$$

$$\frac{8 \cdot 13}{3 \cdot 8} = \frac{104}{24}$$

- Simplify, if necessary.

$$\frac{6}{20} = \frac{3}{10}$$

$$\frac{104}{24} = 4\frac{1}{3}$$

Dividing Fractions

Find $8 \div \frac{4}{5}$.

- The reciprocal of $\frac{4}{5}$ is $\frac{5}{4}$.

$$\frac{4}{5} \times \frac{5}{4}$$

- Multiply 8 by the reciprocal.

$$8 \div \frac{4}{5} = 8 \times \frac{5}{4} = \frac{8}{1} \times \frac{5}{4} = \frac{2 \times 5}{1 \times 1} = 10$$

$$8 \div \frac{4}{5} = 10$$

Find $\frac{4}{9} \div \frac{8}{15}$.

- The reciprocal of $\frac{8}{15}$ is $\frac{15}{8}$.

$$\frac{8}{15} \times \frac{15}{8}$$

- Multiply $\frac{4}{9}$ by the reciprocal.

$$\frac{4}{9} \div \frac{8}{15} = \frac{4}{9} \times \frac{15}{8} = \frac{1 \cancel{4}}{3} \times \frac{15^5}{\cancel{8}_2} = \frac{1 \times 5}{3 \times 2} = \frac{5}{6}$$

$$\frac{4}{9} \div \frac{8}{15} = \frac{5}{6}$$

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6A

BASIC SKILLS**Adding and Subtracting Fractions**

Find the sum or difference.

1. $\frac{1}{3} + \frac{1}{3} = \underline{\quad}$

2. $\frac{2}{5} + \frac{1}{5} = \underline{\quad}$

3. $\frac{6}{12} - \frac{5}{12} = \underline{\quad}$

4. $\frac{6}{7} - \frac{4}{7} = \underline{\quad}$

5. $\frac{8}{11} - \frac{1}{11} = \underline{\quad}$

6. $\frac{4}{14} + \frac{5}{14} = \underline{\quad}$

Find the sum or difference. Write in simplest form.

7.
$$\begin{array}{r} \frac{9}{10} \\ - \frac{7}{10} \\ \hline \end{array}$$

8.
$$\begin{array}{r} \frac{5}{9} \\ - \frac{2}{9} \\ \hline \end{array}$$

9.
$$\begin{array}{r} \frac{3}{8} \\ + \frac{3}{8} \\ \hline \end{array}$$

10.
$$\begin{array}{r} \frac{2}{3} \\ + \frac{2}{3} \\ \hline \end{array}$$

11.
$$\begin{array}{r} \frac{1}{3} \\ + \frac{1}{6} \\ \hline \end{array}$$

12.
$$\begin{array}{r} \frac{1}{4} \\ + \frac{3}{8} \\ \hline \end{array}$$

13.
$$\begin{array}{r} \frac{3}{4} \\ - \frac{1}{12} \\ \hline \end{array}$$

14.
$$\begin{array}{r} \frac{4}{5} \\ - \frac{1}{10} \\ \hline \end{array}$$

15.
$$\begin{array}{r} \frac{1}{9} \\ + \frac{1}{3} \\ \hline \end{array}$$

16.
$$\begin{array}{r} \frac{1}{10} \\ + \frac{2}{5} \\ \hline \end{array}$$

17.
$$\begin{array}{r} \frac{2}{3} \\ + \frac{1}{9} \\ \hline \end{array}$$

18.
$$\begin{array}{r} \frac{5}{8} \\ - \frac{1}{2} \\ \hline \end{array}$$

19.
$$\begin{array}{r} 3\frac{3}{6} \\ + 1\frac{2}{3} \\ \hline \end{array}$$

20.
$$\begin{array}{r} 3\frac{7}{10} \\ + 4\frac{4}{5} \\ \hline \end{array}$$

21.
$$\begin{array}{r} 4\frac{7}{8} \\ - 2\frac{1}{2} \\ \hline \end{array}$$

22.
$$\begin{array}{r} 2\frac{5}{8} \\ + 2\frac{3}{4} \\ \hline \end{array}$$

Name _____ Date _____

6B

BASIC SKILLS**Adding and Subtracting Fractions**

Find the sum or difference. Write in simplest form.

1.
$$\begin{array}{r} \frac{13}{25} \\ - \frac{1}{5} \\ \hline \end{array}$$

2.
$$\begin{array}{r} \frac{5}{8} \\ - \frac{1}{4} \\ \hline \end{array}$$

3.
$$\begin{array}{r} \frac{4}{9} \\ - \frac{1}{3} \\ \hline \end{array}$$

4.
$$\begin{array}{r} \frac{11}{12} \\ - \frac{3}{4} \\ \hline \end{array}$$

5.
$$\begin{array}{r} 3\frac{4}{7} \\ - 2\frac{1}{3} \\ \hline \end{array}$$

6.
$$\begin{array}{r} 5\frac{1}{3} \\ + 4\frac{3}{4} \\ \hline \end{array}$$

7.
$$\begin{array}{r} 7\frac{2}{3} \\ + 1\frac{4}{8} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 4\frac{3}{5} \\ + 1\frac{4}{8} \\ \hline \end{array}$$

9.
$$\begin{array}{r} 9\frac{8}{10} \\ - 2\frac{2}{5} \\ \hline \end{array}$$

10.
$$\begin{array}{r} \frac{1}{3} \\ + \frac{3}{5} \\ \hline \end{array}$$

11.
$$\begin{array}{r} 18\frac{4}{6} \\ - 5\frac{1}{3} \\ \hline \end{array}$$

12.
$$\begin{array}{r} 9\frac{9}{10} \\ - 7\frac{1}{2} \\ \hline \end{array}$$

Rename before subtracting. Write the answer in simplest form.

13.
$$\begin{array}{r} 4\frac{1}{8} \\ - 2\frac{3}{8} \\ \hline \end{array}$$

14.
$$\begin{array}{r} 9\frac{2}{8} \\ - 2\frac{5}{8} \\ \hline \end{array}$$

15.
$$\begin{array}{r} 7\frac{3}{5} \\ - 1\frac{4}{5} \\ \hline \end{array}$$

16.
$$\begin{array}{r} 9\frac{2}{8} \\ - 2\frac{5}{8} \\ \hline \end{array}$$

17.
$$\begin{array}{r} 4\frac{2}{8} \\ - 1\frac{3}{5} \\ \hline \end{array}$$

18.
$$\begin{array}{r} 12\frac{1}{2} \\ - 6\frac{4}{5} \\ \hline \end{array}$$

19.
$$\begin{array}{r} 7\frac{2}{4} \\ - 3\frac{4}{6} \\ \hline \end{array}$$

20.
$$\begin{array}{r} 35\frac{1}{5} \\ - 31\frac{1}{2} \\ \hline \end{array}$$

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7A

BASIC SKILLS**Multiplying Fractions**

Draw a model to find the product.

1. $2 \times \frac{3}{4}$

2. $8 \times \frac{3}{4}$

3. $10 \times \frac{5}{6}$

4. $3 \times \frac{4}{5}$

5. $6 \times \frac{3}{5}$

6. $5 \times \frac{2}{3}$

Write the product in simplest form.

7. $\frac{3}{7} \times \frac{4}{5} =$ _____

8. $\frac{3}{10} \times \frac{3}{10} =$ _____

9. $10 \times \frac{2}{5} =$ _____

10. $3 \times \frac{4}{5} =$ _____

11. $5 \times \frac{1}{3} =$ _____

12. $\frac{3}{5} \times \frac{2}{7} =$ _____

13. $1\frac{2}{3} \times 2\frac{1}{2} =$ _____

14. $\frac{3}{8} \times 1\frac{3}{4} =$ _____

15. $2\frac{3}{4} \times 3 =$ _____

16. $2\frac{3}{7} \times 2 =$ _____

17. $\frac{2}{9} \times \frac{5}{9} =$ _____

18. $\frac{1}{2} \times 6 =$ _____

19. $9 \times \frac{1}{6} =$ _____

20. $2\frac{1}{2} \times 3 =$ _____

21. $6\frac{1}{4} \times 10 =$ _____

22. $4\frac{1}{2} \times 1\frac{1}{4} =$ _____

23. $1\frac{2}{3} \times 1\frac{2}{5} =$ _____

24. $\frac{6}{7} \times 2\frac{1}{2} =$ _____

Name _____ Date _____

7B

BASIC SKILLS**Multiplying Fractions**

Write the product in simplest form.

1. $3 \times \frac{4}{5} =$ _____

2. $5 \times \frac{1}{3} =$ _____

3. $\frac{3}{5} \times \frac{2}{7} =$ _____

4. $\frac{2}{3} \times 8 =$ _____

5. $\frac{4}{9} \times \frac{3}{8} =$ _____

6. $3 \times \frac{2}{3} =$ _____

7. $\frac{7}{8} \times \frac{3}{4} =$ _____

8. $\frac{5}{6} \times \frac{5}{7} =$ _____

9. $\frac{3}{10} \times \frac{4}{5} =$ _____

10. $\frac{4}{5} \times \frac{4}{5} =$ _____

11. $\frac{4}{9} \times \frac{3}{8} =$ _____

12. $\frac{2}{9} \times \frac{2}{5} =$ _____

13. $\frac{3}{8} \times \frac{6}{7} =$ _____

14. $3 \times \frac{2}{7} =$ _____

15. $\frac{1}{4} \times 2 =$ _____

16. $6 \times \frac{1}{5} =$ _____

17. $\frac{5}{12} \times \frac{3}{4} =$ _____

18. $\frac{5}{7} \times \frac{5}{6} =$ _____

19. $\frac{3}{4} \times \frac{7}{10} =$ _____

20. $\frac{3}{7} \times \frac{3}{7} =$ _____

21. $\frac{5}{6} \times \frac{3}{10} =$ _____

22. $3\frac{1}{5} \times 2 =$ _____

23. $5 \times 2\frac{1}{4} =$ _____

24. $2 \times 4\frac{1}{3} =$ _____

25. $2\frac{1}{5} \times 4 =$ _____

26. $1\frac{1}{9} \times 6 =$ _____

27. $6 \times 1\frac{3}{7} =$ _____

28. $\frac{3}{5} \times 2\frac{3}{4} =$ _____

29. $3\frac{1}{3} \times 1\frac{1}{4} =$ _____

30. $\frac{6}{7} \times 2\frac{1}{2} =$ _____

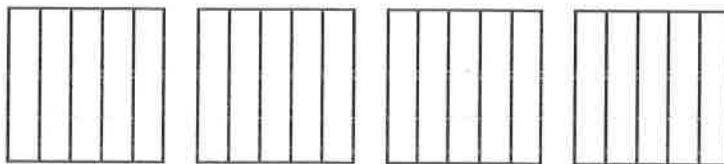
Name _____ Date _____

8A

BASIC SKILLS**Dividing Fractions**

1. How many fifths are in four?

$4 \div \frac{1}{5} = \underline{\hspace{2cm}}$



Draw a model to find the quotient.

2. $5 \div \frac{1}{6}$

3. $3 \div \frac{1}{8}$

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

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

6. $4 \div \frac{1}{5}$

7. $4 \div \frac{1}{6}$

Write the quotient in simplest form.

8. $2 \div \frac{1}{6} = \underline{\hspace{2cm}}$

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

10. $3 \div \frac{1}{6} = \underline{\hspace{2cm}}$

11. $6 \div \frac{1}{4} = \underline{\hspace{2cm}}$

12. $2 \div \frac{1}{2} = \underline{\hspace{2cm}}$

13. $4 \div \frac{1}{5} = \underline{\hspace{2cm}}$

14. $5 \div \frac{1}{2} = \underline{\hspace{2cm}}$

15. $3 \div \frac{1}{3} = \underline{\hspace{2cm}}$

16. $2 \div \frac{1}{6} = \underline{\hspace{2cm}}$

17. $12 \div \frac{1}{3} = \underline{\hspace{2cm}}$

18. $16 \div \frac{1}{3} = \underline{\hspace{2cm}}$

19. $8 \div \frac{1}{4} = \underline{\hspace{2cm}}$

Name _____ Date _____

8B

BASIC SKILLS**Dividing Fractions**

Write the quotient in simplest form.

1. $3 \div \frac{1}{3} =$ _____

2. $2 \div \frac{1}{2} =$ _____

3. $15 \div \frac{1}{5} =$ _____

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

5. $30 \div \frac{1}{2} =$ _____

6. $14 \div \frac{2}{3} =$ _____

7. $12 \div \frac{1}{3} =$ _____

8. $16 \div \frac{1}{3} =$ _____

9. $8 \div \frac{1}{4} =$ _____

10. $8 \div \frac{7}{10} =$ _____

11. $6 \div \frac{2}{9} =$ _____

12. $9 \div \frac{5}{6} =$ _____

13. $\frac{1}{2} \div \frac{2}{5} =$ _____

14. $\frac{1}{3} \div \frac{1}{3} =$ _____

15. $\frac{2}{5} \div \frac{1}{2} =$ _____

16. $\frac{4}{9} \div \frac{1}{3} =$ _____

17. $\frac{2}{7} \div \frac{1}{14} =$ _____

18. $\frac{3}{8} \div \frac{2}{5} =$ _____

19. $\frac{1}{2} \div \frac{4}{9} =$ _____

20. $\frac{8}{15} \div \frac{4}{5} =$ _____

21. $\frac{3}{11} \div \frac{1}{22} =$ _____

22. $7\frac{3}{5} \div 5 =$ _____

23. $2\frac{1}{2} \div 10 =$ _____

24. $4\frac{2}{3} \div 3 =$ _____

25. $6\frac{2}{3} \div \frac{5}{6} =$ _____

26. $3\frac{1}{4} \div \frac{1}{2} =$ _____

27. $5 \div 5\frac{2}{3} =$ _____

28. $6\frac{1}{8} \div 5\frac{1}{2} =$ _____

29. $5\frac{2}{3} \div 3\frac{5}{9} =$ _____

30. $10\frac{1}{4} \div 2\frac{1}{3} =$ _____

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9A

BASIC SKILLS:**Decimals: Comparing and Ordering**

Write the decimal as a fraction. Then rewrite in simplest form.

1. 0.02 _____

2. 0.10 _____

3. 0.20 _____

4. 0.50 _____

5. 0.41 _____

6. 0.355 _____

Compare. Write $>$, $<$, or $=$.

7. 5.2 4.6

8. 72.9 72.1

9. 1.5 1.511

10. 4.09 4.1

11. 0.6 0.65

12. 3.2 3.09

13. 0.8 0.78

14. 8.19 8.912

15. 1.1 1.10

16. 0.324 0.21

17. 12.3 12.29

18. 2.7 2.71

19. 0.87 0.08

20. 1.43 1.5

21. 5.2 5.09

22. 5.06 5.60

23. 1.12 2.12

24. 4.2 2.361

25. 36.02 63.01

26. 8.02 0.81

27. 51.0 1.50

28. 3.35 3.453

29. 0.31 3.01

30. 4.17 7.04

31. 66.7 66.29

32. 9.06 9.6

33. 3.03 0.303

34. 14.40 14.4

35. 5.12 5.01

36. 0.07 0.70

Name _____ Date _____

9B

BASIC SKILLS:**Decimals: Comparing and Ordering**Compare. Write $>$, $<$, or $=$.

1. $3.03 \bigcirc 0.30$

2. $7.08 \bigcirc 0.87$

3. $1.11 \bigcirc 1.10$

4. $2.97 \bigcirc 29.7$

5. $14.14 \bigcirc 4.14$

6. $9.8 \bigcirc 98.1$

7. $19.83 \bigcirc 198.3$

8. $52.20 \bigcirc 52.02$

9. $8.06 \bigcirc 8.060$

10. $38.83 \bigcirc 83.38$

11. $5.55 \bigcirc 5.50$

12. $7.9 \bigcirc 9.72$

13. $5.12 \bigcirc 2.98$

14. $32.95 \bigcirc 3.295$

15. $0.063 \bigcirc 0.603$

16. $91 \bigcirc 19.91$

17. $0.4 \bigcirc 0.40$

18. $8.872 \bigcirc 8.827$

Order from least to greatest.

19. $0.77, 1.70, 0.70, 7.07$ _____

20. $0.8, 1.08, 0.81, 0.081$ _____

21. $3.5, 0.35, 30.5, 0.035$ _____

22. $2.05, 1.15, 0.5, 0.55$ _____

23. $14.06, 0.36, 6.86, 0.8$ _____

24. $39.5, 9.5, 3.09, 5.93$ _____

25. $3.20, 4.32, 2.04, 3.22$ _____

Addition

- > Find the decimal
- > Line up the decimals
- > Fill in empty spots with zero
- > Add
- > Bring down the decimal in your answer

EXAMPLE

Rewritten with decimals lined up...

$$\begin{array}{r} 10.50 \\ + 11.74 \\ \hline 22.24 \end{array}$$

Subtraction

- > Find the decimal
- > Line up the decimals
- > Fill in empty spots with zero
- > Subtract
- > Bring down the decimal in your answer

EXAMPLE

Rewritten with decimals lined up...

$$\begin{array}{r} 12.70 \\ - 9.23 \\ \hline 3.47 \end{array}$$

Rules of Decimals

Multiplication

- > The number with most digits goes on top
- > Decimals do not have to line up
- > Multiply like normal
- > Count how many places in first number the decimal is moved over
- > Count how many places in 2nd number the decimal is moved over
- > This is how many places you move the decimal in your answer

EXAMPLE

$$\begin{array}{r} 1.201 < 3 \text{ DECIMAL PLACES} \\ \times 2.5 < 2 \text{ DECIMAL PLACES} \\ \hline 6005 \\ 24020 \\ \hline 30025 < 5 \text{ DECIMAL PLACES} \end{array}$$

Division

- > Divisor can not have a decimal
- > Move the divisor decimal so it is a whole number
- > Move the same amount of places in dividend
- > Place a decimal straight up where you write your answer, rewrite problem
- > Divide like normal

EXAMPLE

DIVISOR > 0.3 | 1.41

$$\begin{array}{r} 4.7 \\ 3 \overline{) 14.1} \\ -12 \\ \hline 21 \\ -21 \\ \hline 0 \end{array}$$

Name _____ Date _____

10A

BASIC SKILLS**Adding and Subtracting Decimals**

Estimate the sum or difference.

1. $3.2 + 4.3 =$ _____

2. $9.1 - 1.9 =$ _____

3. $16.3 + 2.8 =$ _____

4.
$$\begin{array}{r} 6.2 \\ + 4.9 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 15.08 \\ + 5.70 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 0.78 \\ + 66.51 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 2.18 \\ + 62.62 \\ \hline \end{array}$$

Estimate to determine whether the sum or difference is reasonable. Write *yes* or *no*.

8.
$$\begin{array}{r} 7.5 \\ + 9.0 \\ \hline 25.5 \end{array}$$

9.
$$\begin{array}{r} 14.9 \\ - 10.2 \\ \hline 14.7 \end{array}$$

10.
$$\begin{array}{r} 13.8 \\ - 8.1 \\ \hline 0.7 \end{array}$$

11.
$$\begin{array}{r} 8.62 \\ - 7.24 \\ \hline 1.08 \end{array}$$

12.
$$\begin{array}{r} 14.8 \\ + 6.3 \\ \hline 20.1 \end{array}$$

13.
$$\begin{array}{r} 239.9 \\ - 103.5 \\ \hline 10.4 \end{array}$$

Find the sum or difference. Estimate to check that your answer is reasonable.

14.
$$\begin{array}{r} 7.3 \\ + 0.2 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 6.5 \\ + 1.65 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 0.8 \\ + 0.4 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 5.39 \\ - 2.30 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 4.32 \\ - 1.97 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 5.8 \\ - 1.92 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 7.8 \\ - 3.91 \\ \hline \end{array}$$

21.
$$\begin{array}{r} 14.01 \\ + 0.35 \\ \hline \end{array}$$

22.
$$\begin{array}{r} 0.535 \\ + 2.16 \\ \hline \end{array}$$

23.
$$\begin{array}{r} 15 \\ + 2.45 \\ \hline \end{array}$$

Name _____ Date _____

10B

BASIC SKILLS**Adding and Subtracting Decimals**

Estimate. Then find the sum.

1.
$$\begin{array}{r} 0.5 \\ + 0.3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 8.5 \\ + 0.31 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 4.34 \\ + 2.8 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 3.95 \\ + 0.21 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 12.45 \\ + 2.16 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 0.312 \\ + 0.82 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 35.6 \\ + 2.45 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 4.34 \\ + 2.8 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 14.34 \\ + 2.05 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 3.95 \\ + 0.246 \\ \hline \end{array}$$

11. $0.31 + 36.513 =$ _____

12. $5.16 + 2.043 =$ _____

13. $5 + 0.6 + 1.89 =$ _____

14. $98 + 8.01 + 0.62 =$ _____

15. $0.5 + 15.05 =$ _____

16. $3 + 0.2 =$ _____

Estimate. Then find the difference.

17.
$$\begin{array}{r} 5.4 \\ - 1.3 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 76.8 \\ - 21.9 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 16 \\ - 9.32 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 86.12 \\ - 5.984 \\ \hline \end{array}$$

21.
$$\begin{array}{r} 95 \\ - 10.2 \\ \hline \end{array}$$

22.
$$\begin{array}{r} 86.3 \\ - 5.921 \\ \hline \end{array}$$

23.
$$\begin{array}{r} 7 \\ - 1.9 \\ \hline \end{array}$$

24.
$$\begin{array}{r} 5 \\ - 2.8 \\ \hline \end{array}$$

25. $5.6 - 1.92 =$ _____

26. $7.321 - 5 =$ _____

27. $5.38 - 0.9 =$ _____

28. $86 - 4.93 =$ _____

29. $76.8 - 21.49 =$ _____

30. $7.02 - 3.199 =$ _____

Name _____ Date _____

11A BASIC SKILLS**Multiplying Decimals**

Use an estimate to write the decimal point in the product.

$$\begin{array}{r} 1. \quad 6.27 \\ \times 4.9 \\ \hline 30723 \end{array}$$

$$\begin{array}{r} 2. \quad 5.8 \\ \times 3.7 \\ \hline 2146 \end{array}$$

$$\begin{array}{r} 3. \quad 27.8 \\ \times 3.81 \\ \hline 105918 \end{array}$$

$$\begin{array}{r} 4. \quad 432.3 \\ \times 7.6 \\ \hline 328548 \end{array}$$

Estimate the product.

$$\begin{array}{r} 5. \quad 5.72 \\ \times 3.8 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 1.5 \\ \times 8.6 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 16.2 \\ \times 9.2 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 20.8 \\ \times 6.2 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 25.9 \\ \times 4.7 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 87.2 \\ \times 8.3 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 14.9 \\ \times 6.7 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 97.2 \\ \times 6.8 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 36.6 \\ \times 1.2 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 79.2 \\ \times 2.5 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 69.8 \\ \times 2.4 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 29.7 \\ \times 6.3 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad 8.91 \\ \times 3.1 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 6.5 \\ \times 4.9 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 37.0 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad 97.3 \\ \times 4.2 \\ \hline \end{array}$$

$$21. \quad 26.6 \times 1.3 = \underline{\hspace{2cm}}$$

$$22. \quad 0.79 \times 80.7 = \underline{\hspace{2cm}}$$

$$23. \quad 0.66 \times 0.4 = \underline{\hspace{2cm}}$$

$$24. \quad 27.3 \times 0.09 = \underline{\hspace{2cm}}$$

Name _____ Date _____

11B

BASIC SKILLS**Multiplying Decimals**

Write the factors as fractions. Then multiply the fractions. Rewrite the product as a decimal.

1. 0.2×0.4

$$\frac{2}{10} \times \frac{4}{10} = \frac{8}{100} = 0.08$$

2. 0.31×0.7

$$\underline{\quad} \times \underline{\quad} = \underline{\quad} = \underline{\quad}$$

3. 0.27×0.05

$$\underline{\quad} \times \underline{\quad} = \underline{\quad} = \underline{\quad}$$

4.
$$\begin{array}{r} 8.6 \\ \times 6.2 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 0.7 \\ \times .002 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 3.4 \\ \times 5.8 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 5.8 \\ \times 2.9 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 1.9 \\ \times 7.3 \\ \hline \end{array}$$

9.
$$\begin{array}{r} .17 \\ \times .005 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 7.15 \\ \times 3.8 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 69.2 \\ \times 4.3 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 80.3 \\ \times 9.1 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 7.0 \\ \times 5.9 \\ \hline \end{array}$$

Estimate. Then find the product.

14. $2.9 \times .003 = \underline{\quad}$

15. $8.6 \times 9.8 = \underline{\quad}$

16. $9.2 \times 1.6 = \underline{\quad}$

17. $6.1 \times 2.4 = \underline{\quad}$

Name _____ Date _____

12A

BASIC SKILLS**Dividing Decimals**

Use compatible numbers to estimate the quotient.

1. $8 \overline{)58.3}$

2. $5 \overline{)2.04}$

3. $7 \overline{)50.34}$

4. $6 \overline{)7.35}$

5. $12 \overline{)492}$

6. $4 \overline{)1.73}$

7. $4 \overline{)1.283}$

8. $31 \overline{)62.9}$

Find the quotient.

9. $6 \overline{)19.44}$

10. $5 \overline{)21.8}$

11. $3 \overline{)12.45}$

12. $4 \overline{)94.4}$

13. $5 \overline{)31.9}$

14. $7 \overline{)25.06}$

15. $8 \overline{).096}$

16. $5 \overline{)39.3}$

17. $5 \overline{)26.5}$

18. $2 \overline{)4.298}$

19. $3 \overline{)1.023}$

20. $9 \overline{)19.89}$

21. $16.5 \div 10 = \underline{\hspace{2cm}}$

22. $3.294 \div 1000 = \underline{\hspace{2cm}}$

23. $29.85 \div 100 = \underline{\hspace{2cm}}$

24. $73.4 \div 10 = \underline{\hspace{2cm}}$

25. $0.43 \div 10 = \underline{\hspace{2cm}}$

26. $27.14 \div 10 = \underline{\hspace{2cm}}$

Name _____ Date _____

12B

BASIC SKILLS**Dividing Decimals**

Find the quotient.

1. $5 \overline{)71.7}$

2. $2 \overline{)9.15}$

3. $4 \overline{)1.4}$

4. $6 \overline{)3.3}$

5. $8 \overline{)83.6}$

6. $5 \overline{)13.7}$

7. $2 \overline{)7.9}$

8. $6 \overline{)5.82}$

9. $9 \overline{)20.25}$

10. $11 \overline{)3.41}$

11. $15 \overline{)71.25}$

12. $32 \overline{)81.6}$

Find the quotient. Remember to place the dollar sign in your answer.

13. $6 \overline{)\$42}$

14. $5 \overline{)\$.65}$

15. $9 \overline{)\$7.02}$

16. $4 \overline{)\$2.56}$

17. $12 \overline{)\$24.12}$

18. $9 \overline{)\$123.30}$

19. $3 \overline{)\$45.06}$

20. $7 \overline{)\$620.20}$

21. $38 \overline{)\$22.42}$

22. $5 \overline{)\$62.15}$

23. $4 \overline{)\$34.56}$

24. $25 \overline{)\$23.75}$

Name _____

Divide Decimals

You can multiply the dividend and the divisor by the same power of 10 to make the divisor a whole number. As long as you multiply both the dividend and the divisor by the same power of 10, the quotient stays the same.

Example 1: Divide. $0.84 \div 0.07$

Multiply the dividend, 0.84, and the divisor, 0.07, by the power of 10 that makes the divisor a whole number.

$$\begin{array}{r} 0.84 \div 0.07 = ? \\ \downarrow \quad \downarrow \\ \times 100 \quad \times 100 \\ \downarrow \quad \downarrow \\ \underline{84} \div \underline{7} = 12 \end{array}$$

Since $84 \div 7 = 12$, you know that $0.84 \div 0.07 = \underline{12}$.

Example 2: Divide. $4.42 \div 3.4$

Multiply both the dividend and the divisor by 10 to make the divisor a whole number.

$$3.4 \overline{)4.42} \quad \xrightarrow{\text{Multiply 3.4 and 4.42 both by 10}} \quad 34 \overline{)44.2}$$

Divide as you would whole numbers. Place the decimal point in the quotient, above the decimal point in the dividend.

So, $4.42 \div 3.4 = \underline{1.3}$.

$$\begin{array}{r} 1.3 \\ 34 \overline{)44.2} \\ - 34 \\ \hline 102 \\ - 102 \\ \hline 0 \end{array}$$

Copy and complete the pattern.

1. $54 \div 6 = \underline{\quad}$

2. $184 \div 23 = \underline{\quad}$

3. $138 \div 2 = \underline{\quad}$

$5.4 \div \underline{\quad} = 9$

$18.4 \div \underline{\quad} = 8$

$13.8 \div \underline{\quad} = 69$

$\underline{\quad} \div 0.06 = 9$

$\underline{\quad} \div 0.23 = 8$

$\underline{\quad} \div 0.02 = 69$

Divide.

4. $1.4 \overline{)9.8}$

5. $0.3 \overline{)0.6}$

6. $3.64 \div 1.3$

Write Zeros in the Dividend

When there are not enough digits in the dividend to complete the division, you can write zeros to the right of the last digit in a decimal number in the dividend. Writing zeros to the right of the last digit will not change the value of the dividend or the quotient.

Divide. $5.2 \div 8$

Step 1 Divide as you would whole numbers. Place the decimal point in the quotient above the decimal point in the dividend.

$$\begin{array}{r} 0.6 \\ 8 \overline{)5.2} \\ \underline{-48} \\ 4 \end{array}$$

The decimal point in the quotient is directly above the decimal point in the dividend.

Step 2 The difference is less than the divisor. Write a 0 in the dividend to the right of the last digit and continue to divide.

$$\begin{array}{r} 0.65 \\ 8 \overline{)5.20} \\ \underline{-48} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

The difference, 4, is less than the divisor.

Write a 0 in the dividend to the right of the last digit. Then continue to divide.

So, $5.2 \div 8 = \underline{0.65}$

Write the quotient with the decimal point placed correctly.

1. $3 \div 0.4 = 75$

2. $25.2 \div 8 = 315$

3. $60 \div 25 = 24$

4. $8.28 \div 0.72 = 115$

Divide.

5. $6 \overline{)43.5}$

6. $1.4 \overline{)7.7}$

7. $30 \overline{)72}$

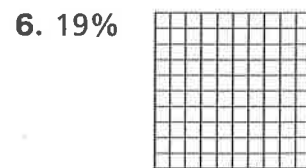
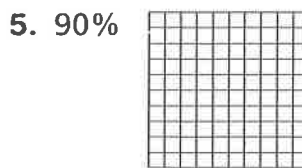
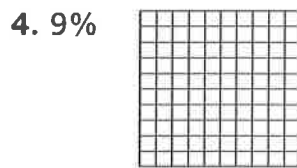
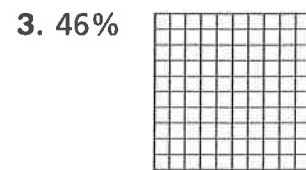
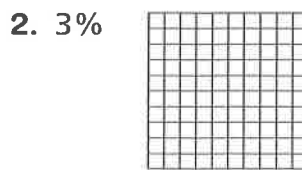
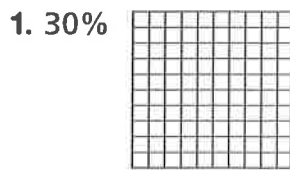
8. $0.18 \overline{)0.63}$

Name _____ Date _____

13A

BASIC SKILLS**Ratio and Percent**

Model the percent by shading the number of squares.



Write as a percent.

7. $\frac{55}{100}$

8. $\frac{4}{100}$

9. $\frac{98}{100}$

10. $\frac{29}{100}$

11. $\frac{5}{100}$

12. $\frac{35}{100}$

13. $\frac{10}{100}$

14. $\frac{84}{100}$

Write as a percent.

15. 0.12

16. 0.8

17. 0.96

18. 0.42

19. 0.77

20. 0.21

21. 0.51

22. 0.1

Name _____ Date _____

13B

BASIC SKILLS**Ratio and Percent**

Write the decimal or fraction as a percent.

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

2. $\frac{35}{100}$

3. $\frac{15}{25}$

4. 0.06

5. 0.58

6. 0.8

7. $\frac{20}{50}$

8. 0.10

Write as a decimal.

9. 4%

10. 82%

11. 21%

12. 45%

13. 56%

14. 1%

15. 83%

16. 6%

Write as a fraction in simplest form.

17. 30%

18. 18%

19. 25%

20. 2%

21. 70%

22. 17%

23. 42%

24. 31%
