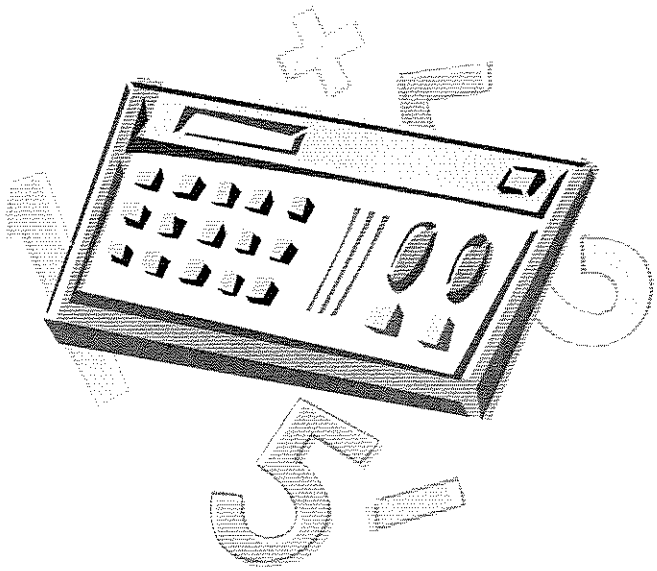
Bryant Middle School

6th grade



Summer Packet

MATH

Math Words

acute angle uh KYOOT ANG gul *(n)* An angle that measures less than 90 degrees.

addend AD end *(n)* Any of the numbers to be added in an addition problem.

addition uh DIHSH un *(n)* The operation of combining two or more addends to get the total number, or sum.

angle ANG gul *(n)* A figure formed by the meeting of two rays at an endpoint.

arc ahrk *(n)* A part of a circle.

area AIR ee uh *(n)* The number of square units within a plane figure.

associative property uh SOH shee ay tihv PRAHP ur tee *(n)* A rule stating that when the grouping of three or more addends or factors changes, the sum or the product remains the same.

average AV ur ij *(n)* The quotient found when the sum of a set of numbers is divided by the number of addends.

axis AK sihs *(n)* One of the perpendicular lines on a graph. The horizontal line is the *x* axis. The vertical line is the *y* axis.

calculator KAL kyuh lay tur *(n)* A device that performs mathematical computations.

Celsius scale SEL see uhs skayl *(n)* The metric temperature scale in which 0°C is the freezing point of water and 100°C is the boiling point.

centimeter SEN tuh mee tur *(n)* A metric unit of length equal to one hundredth of a meter.

chord kord *(n)* A straight line segment that connects two points on a circle.

circle SUR kul *(n)* A plane figure of which every point on the outside edge is the same distance from a center point.

circumference sur KUHM fur uns *(n)* The distance around the outside edge of a circle.

common divisor KAHM un dih VYE zur *(n)* A number that is a divisor of all the numbers in a given set.

common factor KAHM un FAK tur *(n)* A number that is a factor of all the numbers in a given set.

common multiple KAHM un MUHL tuh pul *(n)* A number that is a multiple of all the numbers in a given set.

commutative property KAHM yuh tay tihv PRAHP ur tee *(n)* A rule stating that when the order of two addends or factors changes, the sum or product remains the same.

compass KUHM pus *(n)* An instrument used to make circles or arcs.

composite number kum PAHZ iht NUHM bur *(n)* Any number that can be divided exactly by at least one number other than itself or 1.

cone kohn *(n)* A space figure that has a circular base and is pointed at the other end.

equivalent fractions ih KWIHV uh lunt FRAK shunz *(n)* Fractions that are the same amount.

estimate ES tuh mayt *(v)* To find an answer that is close to the exact answer.

even number EE vun NUHM bur *(n)* Any whole number that has 0, 2, 4, 6, or 8 in the ones place.

expanded form ihk SPAND ud form *(n)* A way to write numbers that shows the place value of each digit.

exponent ek SPOH nunt *(n)* A number or symbol written above and to the right of another number or symbol, telling how many times it is to be used as a factor.

face fays *(n)* The surface of one of the plane figures that make up a space figure.

factor FAK tur *(n)* One of two or more numbers that when multiplied together gives a product.

factor tree FAK tur tree *(n)* A picture to show the prime numbers of a composite number.

Fahrenheit scale FAR un hyt skayl *(n)* The customary temperature scale in which 32°F is the freezing point of water and 212°F is the boiling point.

foot fut *(n)* A customary unit of length equal to 12 inches.

fraction FRAK shun *(n)* A number that expresses a part of a whole.

gallon GAL lun *(n)* A customary unit of liquid measure equal to four quarts.

gram gram *(n)* The basic unit of weight in the metric system.

graph graf *(n)* A picture or chart that shows relationships between things.

greater than GRAY tur than *(n)* The relationship of one number being larger than another number.

greatest common factor (GCF) GRAY tihst KAHM un FAK tur *(n)* The greatest number that evenly divides into a given set of numbers.

hexagon HEK suh gahn *(n)* A polygon with six sides.

improper fraction ihm PRAHP ur FRAK shun *(n)* A fraction whose numerator is greater than or equal to the denominator.

inch ihnch *(n)* A customary unit of length equal to $\frac{1}{12}$ of a foot.

integer IHN tih jur *(n)* Any of the whole numbers or negative numbers, and zero.

interest IHN tur ihst *(n)* Payment for the use of borrowed money.

intersect ihn tur SEKT *(v)* To come together or cross.

isosceles triangle eye SAHS uh leez TRY ang gul *(n)* A triangle with at least two sides the same length and at least two angles the same measure.

multiplication muhl tuh plih KAY shun *(n)* The operation that is a short way of adding a number to itself a certain number of times.

multiplier MUHL tuh plye ur *(n)* A number by which another number is multiplied.

negative number NEG uh tihv NUHM bur *(n)* A number that is less than zero.

number line NUHM bur lyn *(n)* A line that shows numbers in order.

numeral NOO mur ul *(n)* A symbol representing a number.

numerator NOO muh ray tur *(n)* The number above the line in a fraction.

obtuse angle ahb TOOS ANG gul *(n)* An angle that measures more than 90 degrees but less than 180 degrees.

octagon AHK tuh gahn *(n)* A polygon with eight sides.

odd number ahd NUHM bur *(n)* Any whole number that has 1, 3, 5, 7, or 9 in the ones place.

ordinal number OR dn ul NUHM bur *(n)* A number that indicates order or position in a series.

origin OR uh jihn *(n)* The point at which two axes meet on a graph.

ounce ouns *(n)* A customary unit of weight equal to $\frac{1}{16}$ of a pound.

parallel lines PAR uh lel lynz *(n)* Two lines that lie in the same plane but do not intersect.

parallelogram par uh LEL uh gram *(n)* A quadrilateral with two pairs of parallel sides.

pentagon PEN tuh gahn *(n)* A polygon with five sides.

percent pur SENT *(n)* Out of each hundred.

perimeter puh RIHM ih tur *(n)* The distance around a figure.

perpendicular lines per pun DIHK yuh lur lynz *(n)* Two lines that intersect at right angles.

pint pynt *(n)* A customary unit of liquid measure equal to two cups.

place value plays VAL yoo *(n)* The value given to the place a digit occupies in a number.

plane figure playn FIHG yur *(n)* A figure that lies on a flat surface.

polygon PAHL ee gahn *(n)* A closed plane figure formed by line segments.

pound pound *(n)* A customary unit of weight equal to 16 ounces.

prime factorization prym fak tur ih ZAY shun *(n)* Writing a composite number as the product of prime numbers.

prime number prym NUHM bur *(n)* A whole number that cannot be divided without a remainder by any number other than itself and 1.

principal PRIHN suh pul *(n)* An amount of money on which interest is paid.

space figure spays FIHG yur *(n)* A figure that has volume.

sphere sfihr *(n)* A space figure in which all the points on the surface are the same distance from a center point.

square skwair *(n)* A quadrilateral with four right angles and all sides the same length.

square measure skwair MEZH ur *(n)* A unit used to measure area.

subtraction sub TRAK shun *(n)* The operation of finding how many are left when one number is taken away from another number.

subtrahend SUHB truh hend *(n)* The number to be subtracted from another number.

sum suhm *(n)* The number obtained by adding two or more numbers together.

symmetry SIHM ih tree *(n)* An exact matching in size, shape, and position of parts that are on opposite sides of a dividing line or center.

ton tuhn *(n)* A customary unit of weight equal to 2,000 pounds.

trapezoid TRAP ih zoid *(n)* A quadrilateral having one pair of parallel sides.

triangle TRY ang gul *(n)* A polygon with three sides.

unit YOO niht *(n)* An amount or quantity used as a standard of measurement.

vertex VUR teks *(n)* The point at which the rays of an angle intersect.

volume VAHL yoom *(n)* The measure of units of space occupied by a space figure.

whole number hohl NUHM bur *(n)* A number that tells how many complete units there are, such as the numbers 0, 1, 2, 3, 4, and so on.

yard yahrd *(n)* A customary unit of length equal to three feet.

ADDITIONAL WORDS

Name _____ Date _____

(Key 1-3779751)

7 x 4	8 x 5	5 x 5	4 x 5	8 x 8	3 x 9	3 x 2
9 x 1	8 x 3	6 x 3	5 x 9	5 x 2	5 x 4	4 x 3
1 x 3	0 x 3	0 x 7	7 x 2	4 x 4	7 x 0	2 x 5
1 x 2	0 x 4	6 x 5	8 x 1	7 x 6	4 x 0	8 x 6
8 x 2	7 x 1	3 x 5	3 x 4	2 x 9	3 x 1	7 x 3
2 x 7	0 x 9	5 x 3	4 x 6	9 x 8	7 x 5	8 x 9
4 x 8	3 x 6	6 x 2	7 x 8	9 x 7	9 x 9	6 x 4
4 x 1	6 x 8	6 x 6	5 x 0	9 x 6	5 x 7	6 x 1
3 x 0	9 x 5	6 x 0	6 x 7	7 x 7	4 x 9	9 x 3

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 4-3779751)

6 x 3	3 x 1	9 x 6	8 x 3	1 x 7	2 x 3	4 x 1
8 x 8	1 x 4	9 x 0	5 x 6	9 x 7	6 x 6	4 x 3
9 x 5	0 x 5	2 x 1	4 x 8	4 x 7	3 x 2	6 x 0
9 x 8	5 x 1	5 x 3	7 x 9	2 x 8	7 x 1	8 x 2
0 x 3	0 x 7	6 x 2	5 x 8	8 x 9	9 x 9	3 x 0
7 x 8	6 x 7	6 x 1	9 x 4	7 x 0	7 x 6	3 x 3
4 x 6	8 x 0	8 x 1	6 x 8	0 x 8	2 x 4	9 x 1
0 x 9	5 x 4	7 x 2	3 x 9	4 x 0	1 x 6	1 x 5
5 x 7	1 x 9	5 x 2	6 x 4	0 x 4	8 x 5	2 x 6

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 5-3779751)

5 x 2	3 x 8	4 x 0	2 x 0	6 x 3	5 x 7	0 x 2
4 x 8	6 x 7	6 x 1	9 x 2	3 x 0	4 x 7	3 x 1
4 x 6	9 x 6	7 x 8	2 x 7	4 x 3	7 x 1	2 x 3
1 x 8	7 x 3	1 x 2	8 x 7	8 x 2	6 x 5	7 x 5
0 x 8	5 x 9	3 x 6	3 x 3	6 x 2	8 x 1	4 x 9
5 x 4	1 x 9	6 x 4	2 x 4	5 x 1	8 x 9	7 x 4
0 x 6	1 x 4	5 x 6	1 x 7	9 x 8	9 x 0	0 x 4
7 x 6	8 x 6	2 x 2	0 x 5	4 x 1	5 x 0	3 x 5
1 x 6	8 x 5	4 x 4	9 x 7	8 x 4	8 x 0	0 x 9

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 2-3779751)

0 x 3	6 x 1	0 x 7	3 x 3	5 x 3	7 x 4	5 x 4
9 x 6	4 x 7	7 x 2	0 x 6	2 x 5	7 x 3	4 x 6
5 x 7	9 x 5	8 x 5	5 x 5	4 x 4	1 x 2	1 x 8
6 x 3	8 x 8	1 x 6	9 x 0	9 x 8	3 x 7	3 x 8
8 x 3	6 x 6	7 x 1	8 x 6	4 x 8	5 x 0	6 x 5
1 x 4	8 x 0	9 x 2	3 x 1	7 x 6	1 x 5	0 x 9
0 x 2	3 x 0	2 x 2	4 x 1	1 x 9	9 x 9	5 x 8
6 x 7	9 x 1	4 x 9	4 x 5	5 x 2	7 x 7	2 x 3
7 x 0	8 x 7	2 x 7	3 x 9	2 x 9	8 x 2	1 x 3

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 1-3441138)

9 x 5	3 x 9	5 x 7	4 x 3	1 x 4	8 x 7	9 x 1
9 x 7	2 x 4	5 x 3	5 x 0	2 x 5	4 x 5	6 x 3
0 x 3	9 x 4	3 x 4	2 x 9	4 x 8	5 x 9	7 x 4
9 x 6	6 x 7	2 x 7	1 x 5	8 x 6	0 x 6	7 x 1
5 x 6	4 x 0	0 x 2	6 x 9	2 x 8	3 x 1	1 x 0
3 x 8	3 x 7	7 x 6	2 x 6	2 x 2	0 x 0	9 x 0
1 x 8	4 x 7	1 x 7	3 x 6	2 x 1	5 x 2	7 x 9
6 x 6	6 x 8	9 x 2	4 x 9	6 x 0	0 x 5	8 x 0
0 x 8	6 x 2	7 x 3	0 x 9	2 x 0	3 x 2	1 x 2

for teacher to fill out

63 problems _____ wrong _____ correct

Change the Mixed Numbers to Improper Fractions

The first one is done for you: $3\frac{4}{8} = \frac{28}{8} = \frac{7}{2}$

(Multiply the denominator and the whole number and then add the numerator, in the question above, 3x8+4 will give you the numerator which is the top half of the fraction, the denominator is the same but remember, 3 4/8 can actually be reduced to 3 ½ also)

1) $5\frac{2}{4} = \_\_ = \_\_$ 2) $3\frac{6}{7} = \_\_ = \_\_$ 3) $2\frac{4}{9} = \_\_ = \_\_$

4) $7\frac{8}{12} = \_\_ = \_\_$ 5) $2\frac{4}{16} = \_\_ = \_\_$ 6) $5\frac{2}{5} = \_\_ = \_\_$

7) $4\frac{3}{9} = \_\_ = \_\_$ 8) $4\frac{5}{10} = \_\_ = \_\_$ 9) $4\frac{3}{12} = \_\_ = \_\_$

10) $9\frac{6}{6} = \_\_ = \_\_$ 11) $6\frac{2}{6} = \_\_ = \_\_$ 12) $4\frac{8}{32} = \_\_ = \_\_$

13) $3\frac{3}{3} = \_\_ = \_\_$ 14) $2\frac{1}{6} = \_\_ = \_\_$ 15) $2\frac{3}{4} = \_\_ = \_\_$

Name:_____

Name_____

Word Problems

1. When the birthday cake was about to be served, you were told you could have 0.6, 60%, 3/5, 6%. Which 3 will give you the same size portion?

2. 4/7 of the birthday cake was eaten on your birthday. The next day your dad ate 1/2 of what was left. You get to finish the cake, how much is left?

3. The grocery store parking lot will hold 1000 vehicles. 2/5 of the parking spaces are for cars. When you went to buy groceries, there were 200 cars and some trucks in the parking lot. The parking lot was 3/4 full. How many trucks were in it?

4. Justin is making snowballs to build a fort on the winter break. Justin can build 15 snowballs in an hour but 2 snowballs melt every 15 minutes. How long will it take him to build 210 snowballs?

5. The recipe for mint chocolate ice cream requires 2 1/4 cups of cream for 5 people. You need ice cream for 8 people. How much cream will you need?

Name_____

Fraction Word Problems.
Show your work.

1. I had $5\frac{1}{2}$ gallons of paint and used $1\frac{3}{6}$ to gallons paint my bedroom. How much paint do I have left?

2. Jill has $4\frac{2}{4}$ granola bars and Jim has $4\frac{3}{8}$ granola bars. How many granola bars do we have altogether?

3. We had $1\frac{2}{5}$ of a pizza left when we went to bed. The next morning $\frac{3}{4}$ of what was left had been eaten. How much pizza is left?

4. If you have $1\frac{1}{4}$ cookie tarts and added $3\frac{2}{8}$ cookie tarts to them, how many cookie tarts would you have?

5. My glass had $\frac{4}{8}$ of a cup of apple juice left in it. I drank $\frac{2}{8}$ of it, how much is left?

6. My recipe calls for $6\frac{5}{8}$ cups of white flour and and $4\frac{1}{8}$ cups of whole wheat flour. How many cups of flour does the recipe need?

NAME _____

Lesson 2 Multiplication

Multiply 3 ones by 5.

$$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array} \qquad \begin{array}{r} {\scriptstyle 1}\,73 \\ \times 5 \\ \hline 5 \end{array}$$

Multiply 7 tens by 5. Add the tens.

$$\begin{array}{r} 7 \text{ tens} \\ \times 5 \\ \hline 35 \text{ tens} \\ +1 \text{ ten} \\ \hline 36 \text{ tens} \end{array} \qquad \begin{array}{r} {\scriptstyle 1}\,73 \\ \times 5 \\ \hline 365 \end{array}$$

$$\begin{array}{r} {\scriptstyle 2}\,327 \\ \times 4 \\ \hline 8 \end{array} \qquad \begin{array}{r} {\scriptstyle 1\,2}\,327 \\ \times 4 \\ \hline 08 \end{array} \qquad \begin{array}{r} {\scriptstyle 1\,2}\,327 \\ \times 4 \\ \hline 1308 \end{array}$$

Multiply.

	a	*b*	*c*	*d*	*e*	*f*
1.	32 ×2	21 ×3	42 ×2	132 ×2	213 ×3	421 ×2
2.	16 ×4	36 ×2	28 ×3	123 ×4	127 ×3	215 ×4
3.	73 ×3	42 ×4	81 ×5	352 ×2	172 ×4	263 ×3
4.	57 ×5	28 ×6	37 ×4	256 ×3	385 ×2	177 ×5
5.	28 ×6	47 ×8	39 ×5	426 ×7	358 ×6	234 ×5
6.	57 ×8	48 ×2	70 ×5	526 ×3	409 ×5	730 ×7
7.	72 ×9	95 ×7	81 ×8	629 ×8	801 ×7	658 ×9

NAME _____

Lesson 3 Multiplication

41	41	56	56
×2	×20	×3	×30
82	820	168	1680

If $2 \times 41 = 82$, then $20 \times 41 =$ _____.

If $3 \times 56 = 168$, then $30 \times 56 =$ _____.

If $4 \times 27 = 108$, then $40 \times 27 =$ _____.

Multiply 56 by 1.

56
×31
56

Multiply 56 by 30.

56
×31
56
1680

56
×31
56
1680
1736

} Add.

Multiply.

	a	*b*	*c*	*d*	*e*	*f*
1.	23 ×3	23 ×30	43 ×2	43 ×20	51 ×4	51 ×40
2.	37 ×4	37 ×40	54 ×6	54 ×60	73 ×9	73 ×90
3.	42 ×30	75 ×20	54 ×40	62 ×70	84 ×60	32 ×50

Multiply.

	a	*b*	*c*	*d*	*e*
4.	31 ×23	42 ×33	45 ×12	17 ×35	36 ×24
5.	54 ×26	37 ×41	28 ×16	38 ×73	46 ×28

NAME _____

Lesson 4 Multiplication

	Multiply 351 by 7.	Multiply 351 by 20.	
351 ×27	351 ×27 2457	351 ×27 2457 7020	351 ×27 2457 7020 } Add. 9477

Multiply.

	a	*b*	*c*	*d*	*e*
1.	42 ×13	23 ×32	54 ×41	37 ×26	58 ×19
2.	58 ×72	27 ×36	40 ×55	27 ×27	39 ×42
3.	154 ×13	231 ×26	251 ×41	312 ×32	415 ×47
4.	365 ×27	426 ×13	715 ×26	302 ×43	756 ×29

NAME _____

Lesson 5 Multiplication

3254	3254	3254
×2	×20	×200
6508	65080	650800

If $2 \times 3254 = 6508$, then $20 \times 3254 =$ _____.

If $2 \times 3254 = 6508$, then $200 \times 3254 =$ _____.

3254	
×213	
9762	3×3254
32540	10×3254
650800	200×3254
693102	Add.

Multiply.

	a	*b*	*c*	*d*
1.	316 ×2	316 ×200	4281 ×3	4281 ×300
2.	416 ×213	375 ×291	408 ×316	219 ×503
3.	316 ×275	483 ×211	4231 ×213	3456 ×123
4.	2175 ×243	3216 ×208	3090 ×752	6613 ×342

NAME _____ CLASS _____ DATE _____

Dividing Whole Numbers by One-Digit Divisors

What American novelist wrote *The Deerslayer* and *The Last of the Mohicans?*

To solve:

1. Work each exercise.
2. Look at the last two digits of each quotient. Find the same two digits below.
3. Write the letter of the exercise above the number each time it appears.

Example: Divide. **J.** $6\overline{)426}$

Solution: 71 Write *J* above 71.

Divide.

S. $4\overline{)48}$ I. $3\overline{)234}$ R. $8\overline{)512}$

N. $7\overline{)854}$ E. $2\overline{)1,390}$ P. $5\overline{)4,165}$

M. $9\overline{)19,305}$ O. $6\overline{)35,418}$ C. $7\overline{)49,203}$

A. $3\overline{)18,078}$ F. $6\overline{)49,512}$ O. $4\overline{)10,024}$

E. $9\overline{)32,175}$ M. $7\overline{)56,861}$ R. $8\overline{)33,504}$

J													
71	26	23	75	12		52	95	22	78	45	03	64	75

29	03	06	33	95	88

PRE-TEST—Division

NAME _____

Chapter 3

Divide.

	a	*b*	*c*	*d*
1.	$7\overline{)63}$	$6\overline{)54}$	$5\overline{)75}$	$4\overline{)92}$
2.	$4\overline{)136}$	$5\overline{)370}$	$3\overline{)471}$	$2\overline{)960}$
3.	$3\overline{)1539}$	$4\overline{)3672}$	$7\overline{)7105}$	$5\overline{)8605}$
4.	$4\overline{)87}$	$2\overline{)75}$	$3\overline{)86}$	$3\overline{)781}$
5.	$6\overline{)143}$	$4\overline{)9226}$	$2\overline{)1435}$	$5\overline{)6134}$

NAME _____

Lesson 1 Division

If $5 \times 9 = 45$, then $45 \div 5 = 9$ and $45 \div 9 = 5$.

Divide.

	a	*b*	*c*	*d*	*e*	*f*
1.	$2\overline{)6}$	$3\overline{)9}$	$2\overline{)4}$	$2\overline{)8}$	$3\overline{)6}$	$4\overline{)8}$
2.	$1\overline{)5}$	$3\overline{)3}$	$6\overline{)0}$	$1\overline{)9}$	$2\overline{)2}$	$7\overline{)7}$
3.	$4\overline{)28}$	$6\overline{)42}$	$3\overline{)18}$	$6\overline{)36}$	$8\overline{)32}$	$2\overline{)14}$
4.	$2\overline{)10}$	$8\overline{)72}$	$7\overline{)42}$	$5\overline{)20}$	$3\overline{)15}$	$4\overline{)36}$
5.	$8\overline{)24}$	$2\overline{)18}$	$1\overline{)8}$	$4\overline{)32}$	$5\overline{)25}$	$9\overline{)81}$
6.	$7\overline{)35}$	$9\overline{)27}$	$6\overline{)24}$	$7\overline{)49}$	$8\overline{)48}$	$9\overline{)36}$
7.	$5\overline{)40}$	$3\overline{)24}$	$2\overline{)16}$	$6\overline{)48}$	$7\overline{)28}$	$9\overline{)54}$
8.	$5\overline{)15}$	$4\overline{)12}$	$2\overline{)12}$	$3\overline{)0}$	$6\overline{)54}$	$3\overline{)27}$
9.	$4\overline{)20}$	$8\overline{)56}$	$6\overline{)30}$	$4\overline{)24}$	$3\overline{)21}$	$5\overline{)30}$
10.	$8\overline{)16}$	$5\overline{)35}$	$4\overline{)16}$	$8\overline{)64}$	$9\overline{)63}$	$8\overline{)40}$

NAME _____

Lesson 2 Division

Study how to divide 738 by 3.

X	100	200	300
3	300	600	900

738 is between 600 and 900, so $738 \div 3$ is between 200 and 300. The hundreds digit is 2.

```
  2
3 738
  600   (200×3)
  138   Subtract.
```

X	10	20	30	40	50
3	30	60	90	120	150

138 is between 120 and 150, so $138 \div 3$ is between 40 and 50. The tens digit is 4.

```
  24
3 738
  600
  138
  120   (40×3)
   18   Subtract.
```

X	1	2	3	4	5	6
3	3	6	9	12	15	18

$18 \div 3 = 6$, so the ones digit is 6.

```
  246
3 738
  600
  138
  120
   18
   18   (6×3)
    0   Subtract.
```

remainder (r) ---→

Divide.

	a	*b*	*c*	*d*	*e*
1.	$8\overline{)96}$	$4\overline{)72}$	$6\overline{)72}$	$3\overline{)81}$	$4\overline{)68}$
2.	$2\overline{)74}$	$3\overline{)87}$	$5\overline{)75}$	$7\overline{)784}$	$3\overline{)768}$
3.	$8\overline{)296}$	$9\overline{)315}$	$6\overline{)252}$	$6\overline{)462}$	$5\overline{)930}$

NAME _____

Lesson 3 Division

Study how to divide 854 by 4.

X	100	200	300
4	400	800	1200

854

854 ÷ 4 is between 200 and 300. The hundreds digit is 2.

```
  2
4|854
 800    (200×4)
 ---
  54    Subtract.
```

X	10	20	30	40
4	40	80	120	160

54

54 ÷ 4 is between 10 and 20. The tens digit is 1.

```
  21
4|854
 800
 ---
  54
  40    (10×4)
  --
  14    Subtract.
```

X	1	2	3	4	5
4	4	8	12	16	20

14

14 ÷ 4 is between 3 and 4. The ones digit is 3.

```
  213 r2
4|854
 800
 ---
  54
  40
  --
  14
  12    (3×4)
  --
   2    Subtract.
```

Divide.

	a	*b*	*c*	*d*	*e*
1.	$3\overline{)82}$	$5\overline{)86}$	$4\overline{)97}$	$3\overline{)76}$	$2\overline{)47}$
2.	$7\overline{)83}$	$5\overline{)69}$	$6\overline{)224}$	$4\overline{)127}$	$2\overline{)380}$
3.	$4\overline{)231}$	$5\overline{)653}$	$7\overline{)962}$	$2\overline{)483}$	$6\overline{)832}$

NAME _____

Lesson 4 Division

$$\begin{array}{r} 235 \\ 8\overline{)1880} \\ 1600 \\ \hline 280 \\ 240 \\ \hline 40 \\ 40 \\ \hline 0 \end{array}$$

These should be the same.

Check

$$\begin{array}{r} 235 \\ \times 8 \\ \hline 1880 \end{array}$$

$$\begin{array}{r} 178 \text{ r}2 \\ 3\overline{)536} \\ 300 \\ \hline 236 \\ 210 \\ \hline 26 \\ 24 \\ \hline 2 \end{array}$$

These should be the same.

Check

$$\begin{array}{r} 178 \\ \times 3 \\ \hline 534 \\ +2 \\ \hline 536 \end{array}$$

To check $1880 \div 8 = 235$,
multiply 235 by 8. The answer should be _____.
To check $536 \div 3 = 178$ r2,
multiply 178 by 3 and then add 2. The answer should be _____.

Divide. Check each answer.

	a	*b*	*c*
1.	$4\overline{)1104}$	$8\overline{)1760}$	$2\overline{)4632}$
2.	$3\overline{)379}$	$5\overline{)421}$	$4\overline{)762}$
3.	$3\overline{)1058}$	$6\overline{)726}$	$7\overline{)2117}$

NAME _____ DATE _____ PERIOD _____

6-2 Study Guide and Intervention

Adding and Subtracting Fractions

Like fractions are fractions that have the same denominator. To add or subtract like fractions, add or subtract the numerators and write the result over the denominator.

Simplify if necessary.

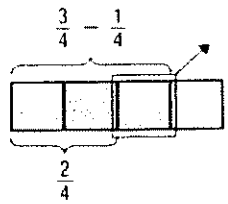
To add or subtract *unlike fractions*, rename the fractions with a least common denominator. Then add or subtract as with like fractions.

EXAMPLE 1 **Subtract $\frac{3}{4} - \frac{1}{4}$. Write in simplest form.**

$$\frac{3}{4} - \frac{1}{4} = \frac{3 - 1}{4}$$ Subtract the numerators.

$$= \frac{2}{4}$$ Write the difference over the denominator.

$$= \frac{1}{2}$$ Simplify.



EXAMPLE 2 **Add $\frac{2}{3} + \frac{1}{12}$. Write in simplest form.**

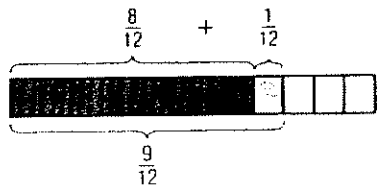
The least common denominator of 3 and 12 is 12.

$$\frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$ Rename $\frac{2}{3}$ using the LCD.

$$\frac{2}{3} \rightarrow \frac{8}{12}$$

$$+\frac{1}{12} \rightarrow +\frac{1}{12}$$

$$\frac{9}{12} \text{ or } \frac{3}{4}$$ Add the numerators and simplify.



EXERCISES

Add or subtract. Write in simplest form.

1. $\frac{5}{8} + \frac{1}{8}$
2. $\frac{7}{9} - \frac{2}{9}$
3. $\frac{1}{2} + \frac{3}{4}$
4. $\frac{7}{8} - \frac{5}{6}$
5. $\frac{5}{9} + \frac{5}{6}$
6. $\frac{3}{8} - \frac{1}{12}$
7. $\frac{3}{10} + \frac{7}{12}$
8. $\frac{2}{5} - \frac{1}{3}$
9. $\frac{7}{15} + \frac{5}{6}$
10. $\frac{7}{9} - \frac{1}{2}$

NAME _____ DATE _____ PERIOD _____

6-2 Practice: Skills

Adding and Subtracting Fractions

Add or subtract. Write in simplest form.

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

ALGEBRA Evaluate each expression if $a = \frac{5}{6}$ and $b = \frac{3}{8}$.

22. $a + b$
23. $a - b$
24. $\frac{9}{10} - a$

Lesson 6–2

NAME _____ DATE _____ PERIOD _____

6-3 Study Guide and Intervention

Adding and Subtracting Mixed Numbers

To add or subtract mixed numbers:

1. Add or subtract the fractions. Rename using the LCD if necessary.
2. Add or subtract the whole numbers.
3. Simplify if necessary.

EXAMPLE 1 Find $14\frac{1}{2} + 18\frac{2}{3}$.

$14\frac{1}{2} \rightarrow 14\frac{3}{6}$ Rename the fractions.

$+18\frac{2}{3} \rightarrow +18\frac{4}{6}$ Add the whole numbers and add the fractions.

$32\frac{7}{6}$ or $33\frac{1}{6}$ Simplify.

EXAMPLE 2 Find $21 - 12\frac{5}{8}$.

$21 \rightarrow 20\frac{8}{8}$ Rename 21 as $20\frac{8}{8}$.

$-12\frac{5}{8} \rightarrow -12\frac{5}{8}$ First subtract the whole numbers and then the fractions.

$8\frac{3}{8}$

EXERCISES

Add or subtract. Write in simplest form.

1. $7\frac{3}{4} + 2\frac{3}{4}$
2. $14\frac{2}{9} - 6\frac{1}{9}$
3. $9\frac{1}{5} - 4\frac{3}{4}$
4. $7\frac{1}{8} + 5\frac{3}{8}$
5. $7\frac{3}{4} + 2\frac{2}{3}$
6. $5\frac{1}{2} - 5\frac{1}{3}$
7. $5\frac{1}{2} - 3\frac{1}{4}$
8. $6\frac{1}{3} + 2\frac{1}{6}$
9. $9 - 3\frac{2}{5}$
10. $2\frac{2}{3} + 7\frac{1}{2}$
11. $6\frac{1}{2} - 6\frac{1}{3}$
12. $18\frac{1}{2} + 5\frac{5}{8}$

Lesson 6–3

NAME _____ DATE _____ PERIOD _____

6-3 Practice: Skills

Adding and Subtracting Mixed Numbers

Add or subtract. Write in simplest form.

1. $3\frac{2}{7} + 2\frac{1}{7}$
2. $7\frac{1}{3} + 7\frac{1}{3}$
3. $9\frac{3}{5} - 2\frac{1}{5}$
4. $7\frac{3}{4} - 5\frac{1}{4}$
5. $3\frac{1}{4} + 5\frac{1}{4}$
6. $6\frac{3}{4} - 5\frac{3}{4}$
7. $12\frac{1}{8} + 9\frac{3}{8}$
8. $5\frac{2}{3} - 2\frac{1}{3}$
9. $14\frac{3}{5} - 9\frac{2}{5}$
10. $5\frac{1}{2} + 3\frac{1}{4}$
11. $2\frac{1}{3} + 6\frac{1}{6}$
12. $6\frac{1}{3} - 6\frac{1}{4}$
13. $7\frac{5}{6} - 2\frac{2}{3}$
14. $6\frac{7}{10} + 5\frac{1}{4}$
15. $12\frac{3}{8} - 9\frac{1}{3}$
16. $12\frac{13}{15} + 4\frac{1}{9}$
17. $15\frac{2}{3} - 7\frac{1}{5}$
18. $4\frac{7}{12} - 2\frac{3}{16}$
19. $8\frac{3}{4} + 3\frac{2}{5}$
20. $12\frac{1}{3} - 8\frac{5}{9}$
21. $8 - 3\frac{2}{5}$
22. $7\frac{7}{9} + 6\frac{7}{8}$
23. $7\frac{7}{9} - 6\frac{7}{8}$
24. $10\frac{3}{8} + 7\frac{11}{12}$

NAME _____ DATE _____ PERIOD _____

6-4 Study Guide and Intervention

Multiplying Fractions and Mixed Numbers

To multiply fractions, multiply the numerators and multiply the denominators.

$$\frac{5}{6} \times \frac{3}{5} = \frac{5 \times 3}{6 \times 5} = \frac{15}{30} = \frac{1}{2}$$

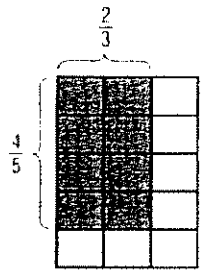
To multiply mixed numbers, rename each mixed number as a fraction. Then multiply the fractions.

$$2\frac{2}{3} \times 1\frac{1}{4} = \frac{8}{3} \times \frac{5}{4} = \frac{40}{12} = 3\frac{1}{3}$$

EXAMPLE 1 **Find $\frac{2}{3} \times \frac{4}{5}$. Write in simplest form.**

$\frac{2}{3} \times \frac{4}{5} = \frac{2 \times 4}{3 \times 5}$ ← Multiply the numerators. ← Multiply the denominators.

$= \frac{8}{15}$ Simplify.



EXAMPLE 2 **Find $\frac{1}{3} \times 2\frac{1}{2}$. Write in simplest form.**

$\frac{1}{3} \times 2\frac{1}{2} = \frac{1}{3} \times \frac{5}{2}$ Rename $2\frac{1}{2}$ as an improper fraction, $\frac{5}{2}$.

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

$= \frac{5}{6}$ Simplify.

EXERCISES

Multiply. Write in simplest form.

1. $\frac{2}{3} \times \frac{2}{3}$
2. $\frac{1}{2} \times \frac{7}{8}$
3. $\frac{1}{3} \times \frac{3}{5}$
4. $\frac{5}{9} \times 4$
5. $1\frac{2}{3} \times \frac{3}{5}$
6. $3\frac{3}{4} \times 1\frac{1}{6}$
7. $\frac{3}{4} \times 1\frac{2}{3}$
8. $3\frac{1}{3} \times 2\frac{1}{2}$
9. $4\frac{1}{5} \times \frac{1}{7}$
10. $\frac{7}{5} \times 8$
11. $2\frac{1}{3} \times \frac{4}{6}$
12. $\frac{1}{8} \times 2\frac{3}{4}$

NAME _____ DATE _____ PERIOD _____

6-4 Practice: Skills

Multiplying Fractions and Mixed Numbers

Multiply. Write in simplest form.

1. $\frac{1}{2} \times \frac{4}{5}$
2. $\frac{1}{9} \times \frac{3}{5}$
3. $\frac{15}{24} \times \frac{3}{20}$
4. $\frac{1}{7} \times \frac{1}{5}$
5. $\frac{5}{7} \times \frac{14}{15}$
6. $\frac{9}{10} \times \frac{5}{9}$
7. $\frac{4}{11} \times \frac{3}{8}$
8. $\frac{2}{3} \times \frac{7}{9}$
9. $\frac{9}{13} \times \frac{26}{27}$
10. $\frac{4}{9} \times 5$
11. $7 \times \frac{2}{7}$
12. $2\frac{4}{5} \times \frac{1}{3}$
13. $4\frac{1}{2} \times \frac{1}{3}$
14. $5\frac{3}{4} \times 12$
15. $14 \times 2\frac{3}{7}$
16. $2\frac{3}{5} \times 1\frac{3}{7}$
17. $1\frac{4}{9} \times 2\frac{4}{7}$
18. $5\frac{5}{6} \times 6\frac{3}{8}$
19. $10\frac{7}{9} \times 4\frac{1}{4}$
20. $9\frac{7}{9} \times 7\frac{3}{4}$
21. $3\frac{3}{4} \times 2\frac{4}{7}$

Lesson 6–4

NAME _____ DATE _____ PERIOD _____

6-6 Study Guide and Intervention

Dividing Fractions and Mixed Numbers

To divide by a fraction, multiply by its multiplicative inverse or reciprocal.

To divide by a mixed number, rename the mixed number as an improper fraction.

EXAMPLE 1 **Find $3\frac{1}{3} \div \frac{2}{9}$. Write in simplest form.**

$3\frac{1}{3} \div \frac{2}{9} = \frac{10}{3} \div \frac{2}{9}$ Rename $3\frac{1}{3}$ as an improper fraction.

$= \frac{10}{3} \cdot \frac{9}{2}$ Multiply by the reciprocal of $\frac{2}{9}$, which is $\frac{9}{2}$.

$= \frac{\overset{5}{\cancel{10}}}{\underset{1}{3}} \cdot \frac{\overset{3}{9}}{\underset{1}{2}}$ Divide out common factors.

$= 15$ Multiply.

EXERCISES

Divide. Write in simplest form.

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

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

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

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

5. $\frac{5}{8} \div 10$

6. $7\frac{1}{3} \div 2$

7. $\frac{5}{6} \div 3\frac{1}{2}$

8. $36 \div 1\frac{1}{2}$

9. $2\frac{1}{2} \div 10$

10. $5\frac{2}{5} \div 1\frac{4}{5}$

11. $6\frac{2}{3} \div 3\frac{1}{9}$

12. $4\frac{1}{4} \div \frac{3}{8}$

13. $4\frac{6}{7} \div 2\frac{3}{7}$

14. $12 \div 2\frac{1}{2}$

15. $4\frac{1}{6} \div 3\frac{1}{6}$

NAME _____ DATE _____ PERIOD _____

6-6 Practice: Skills

Dividing Fractions and Mixed Numbers

Divide. Write in simplest form.

1. $\frac{1}{6} \div \frac{1}{5}$
2. $5 \div \frac{3}{5}$
3. $\frac{6}{7} \div \frac{1}{7}$
4. $\frac{3}{4} \div \frac{1}{2}$
5. $8 \div \frac{1}{3}$
6. $\frac{1}{5} \div \frac{1}{4}$
7. $7 \div \frac{3}{7}$
8. $\frac{4}{7} \div \frac{8}{9}$
9. $8\frac{1}{3} \div 5$
10. $\frac{9}{7} \div \frac{3}{14}$
11. $\frac{12}{5} \div \frac{3}{10}$
12. $5 \div 3\frac{3}{4}$
13. $6\frac{4}{5} \div 17$
14. $7\frac{1}{3} \div 4$
15. $\frac{3}{4} \div 5\frac{1}{2}$
16. $\frac{2}{7} \div 1\frac{13}{14}$
17. $\frac{3}{8} \div 6\frac{1}{4}$
18. $7\frac{1}{2} \div 2\frac{5}{6}$
19. $3\frac{4}{9} \div 2\frac{1}{3}$
20. $2\frac{2}{3} \div 1\frac{1}{6}$
21. $4\frac{3}{4} \div 2\frac{1}{2}$

Lesson 6–6

NAME _____ DATE _____ PERIOD _____

6-2 Study Guide and Intervention

Adding and Subtracting Fractions

Like fractions are fractions that have the same denominator. To add or subtract like fractions, add or subtract the numerators and write the result over the denominator.

Simplify if necessary.

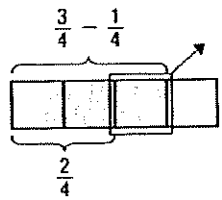
To add or subtract *unlike fractions*, rename the fractions with a least common denominator. Then add or subtract as with like fractions.

EXAMPLE 1 **Subtract $\frac{3}{4} - \frac{1}{4}$. Write in simplest form.**

$\frac{3}{4} - \frac{1}{4} = \frac{3 - 1}{4}$ Subtract the numerators.

$= \frac{2}{4}$ Write the difference over the denominator.

$= \frac{1}{2}$ Simplify.



EXAMPLE 2 **Add $\frac{2}{3} + \frac{1}{12}$. Write in simplest form.**

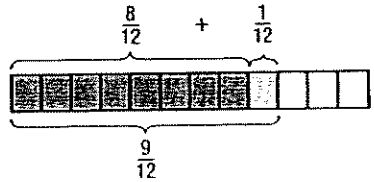
The least common denominator of 3 and 12 is 12.

$\frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$ Rename $\frac{2}{3}$ using the LCD.

$\frac{2}{3} \rightarrow \frac{8}{12}$

$+\frac{1}{12} \rightarrow +\frac{1}{12}$

$\frac{9}{12}$ or $\frac{3}{4}$ Add the numerators and simplify.



EXERCISES

Add or subtract. Write in simplest form.

1. $\frac{5}{8} + \frac{1}{8}$

2. $\frac{7}{9} - \frac{2}{9}$

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

4. $\frac{7}{8} - \frac{5}{6}$

5. $\frac{5}{9} + \frac{5}{6}$

6. $\frac{3}{8} - \frac{1}{12}$

7. $\frac{3}{10} + \frac{7}{12}$

8. $\frac{2}{5} - \frac{1}{3}$

9. $\frac{7}{15} + \frac{5}{6}$

10. $\frac{7}{9} - \frac{1}{2}$

NAME _____ DATE _____ PERIOD _____

6-2 Practice: Skills

Adding and Subtracting Fractions

Add or subtract. Write in simplest form.

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

ALGEBRA **Evaluate each expression if $a = \frac{5}{6}$ and $b = \frac{3}{8}$.**

22. $a + b$
23. $a - b$
24. $\frac{9}{10} - a$

Lesson 6–2

NAME _____ DATE _____ PERIOD ____

6-3 Study Guide and Intervention

Adding and Subtracting Mixed Numbers

To add or subtract mixed numbers:

1. Add or subtract the fractions. Rename using the LCD if necessary.
2. Add or subtract the whole numbers.
3. Simplify if necessary.

EXAMPLE 1 **Find $14\frac{1}{2} + 18\frac{2}{3}$.**

$14\frac{1}{2} \rightarrow 14\frac{3}{6}$ Rename the fractions.

$+18\frac{2}{3} \rightarrow +18\frac{4}{6}$ Add the whole numbers and add the fractions.

$32\frac{7}{6}$ or $33\frac{1}{6}$ Simplify.

EXAMPLE 2 **Find $21 - 12\frac{5}{8}$.**

$21 \rightarrow 20\frac{8}{8}$ Rename 21 as $20\frac{8}{8}$.

$-12\frac{5}{8} \rightarrow -12\frac{5}{8}$ First subtract the whole numbers and then the fractions.

$8\frac{3}{8}$

EXERCISES

Add or subtract. Write in simplest form.

1. $7\frac{3}{4} + 2\frac{3}{4}$
2. $14\frac{2}{9} - 6\frac{1}{9}$
3. $9\frac{1}{5} - 4\frac{3}{4}$
4. $7\frac{1}{8} + 5\frac{3}{8}$
5. $7\frac{3}{4} + 2\frac{2}{3}$
6. $5\frac{1}{2} - 5\frac{1}{3}$
7. $5\frac{1}{2} - 3\frac{1}{4}$
8. $6\frac{1}{3} + 2\frac{1}{6}$
9. $9 - 3\frac{2}{5}$
10. $2\frac{2}{3} + 7\frac{1}{2}$
11. $6\frac{1}{2} - 6\frac{1}{3}$
12. $18\frac{1}{2} + 5\frac{5}{8}$

Lesson 6–3

NAME _____ DATE _____ PERIOD ____

6-3 Practice: Skills

Adding and Subtracting Mixed Numbers

Add or subtract. Write in simplest form.

1. $3\frac{2}{7} + 2\frac{1}{7}$
2. $7\frac{1}{3} + 7\frac{1}{3}$
3. $9\frac{3}{5} - 2\frac{1}{5}$
4. $7\frac{3}{4} - 5\frac{1}{4}$
5. $3\frac{1}{4} + 5\frac{1}{4}$
6. $6\frac{3}{4} - 5\frac{3}{4}$
7. $12\frac{1}{8} + 9\frac{3}{8}$
8. $5\frac{2}{3} - 2\frac{1}{3}$
9. $14\frac{3}{5} - 9\frac{2}{5}$
10. $5\frac{1}{2} + 3\frac{1}{4}$
11. $2\frac{1}{3} + 6\frac{1}{6}$
12. $6\frac{1}{3} - 6\frac{1}{4}$
13. $7\frac{5}{6} - 2\frac{2}{3}$
14. $6\frac{7}{10} + 5\frac{1}{4}$
15. $12\frac{3}{8} - 9\frac{1}{3}$
16. $12\frac{13}{15} + 4\frac{1}{9}$
17. $15\frac{2}{3} - 7\frac{1}{5}$
18. $4\frac{7}{12} - 2\frac{3}{16}$
19. $8\frac{3}{4} + 3\frac{2}{5}$
20. $12\frac{1}{3} - 8\frac{5}{9}$
21. $8 - 3\frac{2}{5}$
22. $7\frac{7}{9} + 6\frac{7}{8}$
23. $7\frac{7}{9} - 6\frac{7}{8}$
24. $10\frac{3}{8} + 7\frac{11}{12}$

NAME _____ DATE _____ PERIOD _____

6-4 Study Guide and Intervention

Multiplying Fractions and Mixed Numbers

To multiply fractions, multiply the numerators and multiply the denominators.

$$\frac{5}{6} \times \frac{3}{5} = \frac{5 \times 3}{6 \times 5} = \frac{15}{30} = \frac{1}{2}$$

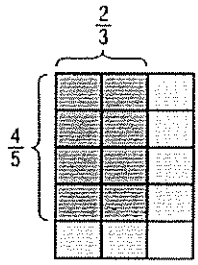
To multiply mixed numbers, rename each mixed number as a fraction. Then multiply the fractions.

$$2\frac{2}{3} \times 1\frac{1}{4} = \frac{8}{3} \times \frac{5}{4} = \frac{40}{12} = 3\frac{1}{3}$$

EXAMPLE 1 **Find $\frac{2}{3} \times \frac{4}{5}$. Write in simplest form.**

$\frac{2}{3} \times \frac{4}{5} = \frac{2 \times 4}{3 \times 5}$ ← Multiply the numerators. ← Multiply the denominators.

$= \frac{8}{15}$ Simplify.



EXAMPLE 2 **Find $\frac{1}{3} \times 2\frac{1}{2}$. Write in simplest form.**

$\frac{1}{3} \times 2\frac{1}{2} = \frac{1}{3} \times \frac{5}{2}$ Rename $2\frac{1}{2}$ as an improper fraction, $\frac{5}{2}$.

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

$= \frac{5}{6}$ Simplify.

EXERCISES

Multiply. Write in simplest form.

1. $\frac{2}{3} \times \frac{2}{3}$
2. $\frac{1}{2} \times \frac{7}{8}$
3. $\frac{1}{3} \times \frac{3}{5}$
4. $\frac{5}{9} \times 4$
5. $1\frac{2}{3} \times \frac{3}{5}$
6. $3\frac{3}{4} \times 1\frac{1}{6}$
7. $\frac{3}{4} \times 1\frac{2}{3}$
8. $3\frac{1}{3} \times 2\frac{1}{2}$
9. $4\frac{1}{5} \times \frac{1}{7}$
10. $\frac{7}{5} \times 8$
11. $2\frac{1}{3} \times \frac{4}{6}$
12. $\frac{1}{8} \times 2\frac{3}{4}$

NAME _____ DATE _____ PERIOD _____

6-4 Practice: Skills

Multiplying Fractions and Mixed Numbers

Multiply. Write in simplest form.

1. $\frac{1}{2} \times \frac{4}{5}$
2. $\frac{1}{9} \times \frac{3}{5}$
3. $\frac{15}{24} \times \frac{3}{20}$
4. $\frac{1}{7} \times \frac{1}{5}$
5. $\frac{5}{7} \times \frac{14}{15}$
6. $\frac{9}{10} \times \frac{5}{9}$
7. $\frac{4}{11} \times \frac{3}{8}$
8. $\frac{2}{3} \times \frac{7}{9}$
9. $\frac{9}{13} \times \frac{26}{27}$
10. $\frac{4}{9} \times 5$
11. $7 \times \frac{2}{7}$
12. $2\frac{4}{5} \times \frac{1}{3}$
13. $4\frac{1}{2} \times \frac{1}{3}$
14. $5\frac{3}{4} \times 12$
15. $14 \times 2\frac{3}{7}$
16. $2\frac{3}{5} \times 1\frac{3}{7}$
17. $1\frac{4}{9} \times 2\frac{4}{7}$
18. $5\frac{5}{6} \times 6\frac{3}{8}$
19. $10\frac{7}{9} \times 4\frac{1}{4}$
20. $9\frac{7}{9} \times 7\frac{3}{4}$
21. $3\frac{3}{4} \times 2\frac{4}{7}$

Lesson 6–4

NAME _____ DATE _____ PERIOD _____

6-6 Study Guide and Intervention

Dividing Fractions and Mixed Numbers

To divide by a fraction, multiply by its multiplicative inverse or reciprocal.

To divide by a mixed number, rename the mixed number as an improper fraction.

EXAMPLE 1 **Find $3\frac{1}{3} \div \frac{2}{9}$. Write in simplest form.**

$3\frac{1}{3} \div \frac{2}{9} = \frac{10}{3} \div \frac{2}{9}$ Rename $3\frac{1}{3}$ as an improper fraction.

$= \frac{10}{3} \cdot \frac{9}{2}$ Multiply by the reciprocal of $\frac{2}{9}$, which is $\frac{9}{2}$.

$= \frac{\overset{5}{\cancel{10}}}{\underset{1}{\cancel{3}}} \cdot \frac{\overset{3}{\cancel{9}}}{\underset{1}{\cancel{2}}}$ Divide out common factors.

$= 15$ Multiply.

EXERCISES

Divide. Write in simplest form.

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

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

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

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

5. $\frac{5}{8} \div 10$

6. $7\frac{1}{3} \div 2$

7. $\frac{5}{6} \div 3\frac{1}{2}$

8. $36 \div 1\frac{1}{2}$

9. $2\frac{1}{2} \div 10$

10. $5\frac{2}{5} \div 1\frac{4}{5}$

11. $6\frac{2}{3} \div 3\frac{1}{9}$

12. $4\frac{1}{4} \div \frac{3}{8}$

13. $4\frac{6}{7} \div 2\frac{3}{7}$

14. $12 \div 2\frac{1}{2}$

15. $4\frac{1}{6} \div 3\frac{1}{6}$

NAME _____ DATE _____ PERIOD _____

6-6 Practice: Skills

Dividing Fractions and Mixed Numbers

Divide. Write in simplest form.

1. $\frac{1}{6} \div \frac{1}{5}$
2. $5 \div \frac{3}{5}$
3. $\frac{6}{7} \div \frac{1}{7}$
4. $\frac{3}{4} \div \frac{1}{2}$
5. $8 \div \frac{1}{3}$
6. $\frac{1}{5} \div \frac{1}{4}$
7. $7 \div \frac{3}{7}$
8. $\frac{4}{7} \div \frac{8}{9}$
9. $8\frac{1}{3} \div 5$
10. $\frac{9}{7} \div \frac{3}{14}$
11. $\frac{12}{5} \div \frac{3}{10}$
12. $5 \div 3\frac{3}{4}$
13. $6\frac{4}{5} \div 17$
14. $7\frac{1}{3} \div 4$
15. $\frac{3}{4} \div 5\frac{1}{2}$
16. $\frac{2}{7} \div 1\frac{13}{14}$
17. $\frac{3}{8} \div 6\frac{1}{4}$
18. $7\frac{1}{2} \div 2\frac{5}{6}$
19. $3\frac{4}{9} \div 2\frac{1}{3}$
20. $2\frac{2}{3} \div 1\frac{1}{6}$
21. $4\frac{3}{4} \div 2\frac{1}{2}$

Lesson 6–6

Name _____ Date _____

(Key 4-3779751)

Cross out the equations that are false.

5 x 5 = 25	9 x 2 = 18	4 x 9 = 36	7 x 7 = 49	6 x 9 = 54	8 x 4 = 32	3 x 7 = 28
3 x 6 = 18	8 x 7 = 64	5 x 9 = 45	5 x 0 = 0	0 x 6 = 0	9 x 3 = 36	4 x 2 = 6
2 x 7 = 14	6 x 5 = 30	0 x 2 = 0	3 x 8 = 24	2 x 0 = 0	1 x 3 = 2	2 x 2 = 4
3 x 5 = 20	4 x 4 = 25	4 x 5 = 20	1 x 2 = 2	8 x 6 = 48	2 x 5 = 15	1 x 8 = 8
2 x 9 = 18	3 x 4 = 12	7 x 3 = 21	7 x 4 = 32	7 x 5 = 35	5 x 5 = 36	4 x 8 = 32
7 x 3 = 21	3 x 7 = 24	7 x 4 = 28	4 x 0 = 0	9 x 9 = 81	2 x 0 = 0	8 x 1 = 2
2 x 9 = 18	8 x 2 = 16	5 x 3 = 15	4 x 9 = 36	0 x 4 = 4	6 x 4 = 24	2 x 5 = 10
1 x 8 = 16	0 x 9 = 0	6 x 2 = 21	3 x 3 = 9	0 x 7 = 0	8 x 5 = 40	3 x 8 = 32
7 x 1 = 7	9 x 2 = 18	5 x 2 = 10	4 x 7 = 19	8 x 6 = 48	9 x 6 = 54	1 x 7 = 7

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 1-3779751)

Cross out the equations that are false.

1 x 7 = 7	9 x 4 = 36	7 x 9 = 63	1 x 6 = 7	0 x 8 = 8	6 x 9 = 54	8 x 0 = 0
3 x 3 = 16	5 x 1 = 5	2 x 0 = 0	2 x 3 = 6	8 x 7 = 56	1 x 5 = 5	0 x 5 = 0
3 x 8 = 32	4 x 2 = 11	0 x 2 = 0	3 x 7 = 21	9 x 0 = 0	2 x 8 = 16	1 x 4 = 4
5 x 6 = 30	2 x 2 = 4	0 x 6 = 0	2 x 1 = 1	8 x 4 = 32	2 x 6 = 21	1 x 8 = 8
1 x 9 = 9	9 x 2 = 16	5 x 8 = 32	4 x 7 = 28	2 x 4 = 8	2 x 9 = 18	2 x 7 = 14
1 x 3 = 3	5 x 4 = 20	4 x 1 = 4	9 x 5 = 50	7 x 5 = 42	5 x 0 = 0	6 x 7 = 52
4 x 5 = 20	4 x 6 = 24	9 x 1 = 9	4 x 3 = 12	7 x 3 = 17	2 x 3 = 15	6 x 0 = 0
8 x 2 = 16	6 x 5 = 30	9 x 6 = 54	6 x 1 = 6	1 x 5 = 5	0 x 5 = 0	6 x 8 = 48
4 x 2 = 10	2 x 1 = 3	4 x 4 = 16	3 x 0 = 4	2 x 8 = 16	4 x 7 = 35	0 x 9 = 0

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 5-3779751)

Cross out the equations that are false.

1 x 5 = 5	2 x 8 = 16	4 x 2 = 16	7 x 7 = 49	2 x 1 = 2	3 x 9 = 18	8 x 3 = 32
5 x 5 = 25	2 x 9 = 18	2 x 6 = 12	9 x 3 = 27	3 x 2 = 6	7 x 2 = 14	3 x 4 = 8
5 x 3 = 18	9 x 5 = 45	0 x 3 = 4	8 x 8 = 64	7 x 0 = 0	9 x 1 = 9	9 x 9 = 81
7 x 9 = 69	9 x 4 = 45	2 x 5 = 10	1 x 3 = 3	6 x 6 = 42	0 x 7 = 0	5 x 8 = 40
6 x 9 = 54	4 x 5 = 20	6 x 8 = 48	3 x 7 = 32	6 x 0 = 6	9 x 5 = 60	9 x 1 = 9
4 x 6 = 24	1 x 2 = 2	6 x 5 = 30	1 x 6 = 6	8 x 0 = 0	9 x 3 = 27	1 x 3 = 3
6 x 4 = 24	0 x 4 = 0	3 x 5 = 15	2 x 4 = 8	6 x 8 = 47	4 x 0 = 0	6 x 2 = 14
1 x 9 = 9	7 x 7 = 42	4 x 8 = 40	4 x 3 = 12	3 x 0 = 0	8 x 8 = 64	8 x 1 = 8
2 x 0 = 0	9 x 7 = 63	7 x 0 = 0	6 x 3 = 18	0 x 9 = 0	7 x 4 = 25	5 x 0 = 0

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 2-3779751)

Cross out the equations that are false.

7 x 9 = 63	3 x 6 = 18	6 x 0 = 0	6 x 9 = 54	2 x 0 = 0	0 x 4 = 0	2 x 4 = 10
6 x 2 = 10	4 x 2 = 15	6 x 4 = 24	7 x 5 = 42	8 x 1 = 8	6 x 8 = 48	9 x 7 = 63
4 x 0 = 0	1 x 7 = 7	0 x 5 = 0	5 x 1 = 5	5 x 9 = 45	0 x 8 = 0	8 x 9 = 80
2 x 6 = 12	9 x 3 = 27	9 x 4 = 36	2 x 1 = 7	3 x 5 = 17	7 x 8 = 56	5 x 6 = 30
2 x 8 = 16	8 x 4 = 32	3 x 4 = 16	3 x 2 = 6	4 x 3 = 15	7 x 3 = 21	2 x 7 = 14
6 x 4 = 35	4 x 1 = 4	5 x 8 = 40	5 x 7 = 35	9 x 2 = 18	1 x 9 = 9	5 x 9 = 36
4 x 2 = 8	2 x 6 = 12	9 x 3 = 20	5 x 5 = 30	3 x 0 = 0	5 x 1 = 5	7 x 7 = 49
6 x 2 = 12	8 x 5 = 40	6 x 6 = 36	2 x 5 = 18	7 x 4 = 35	2 x 0 = 0	9 x 1 = 10
3 x 5 = 15	1 x 6 = 6	4 x 5 = 20	1 x 2 = 3	6 x 3 = 18	2 x 1 = 2	2 x 8 = 18

for teacher to fill out

63 problems _____ wrong _____ correct

Name _____ Date _____

(Key 1-3441138)

Cross out the equations that are false.

8 x 4 = 32	7 x 2 = 14	1 x 3 = 3	6 x 4 = 24	8 x 2 = 16	7 x 5 = 35	4 x 1 = 5
6 x 1 = 6	8 x 1 = 18	5 x 1 = 6	1 x 9 = 9	9 x 3 = 20	5 x 5 = 25	5 x 4 = 20
1 x 6 = 6	7 x 7 = 49	0 x 1 = 0	3 x 3 = 9	3 x 5 = 11	4 x 4 = 16	4 x 6 = 24
4 x 2 = 8	6 x 5 = 30	8 x 3 = 24	3 x 0 = 0	7 x 8 = 56	2 x 3 = 9	7 x 0 = 0
1 x 1 = 1	0 x 4 = 4	5 x 8 = 40	0 x 7 = 0	8 x 5 = 40	0 x 1 = 0	6 x 8 = 48
5 x 0 = 0	6 x 4 = 35	7 x 5 = 35	4 x 4 = 20	1 x 9 = 9	3 x 3 = 9	4 x 9 = 40
9 x 1 = 9	2 x 4 = 8	3 x 8 = 36	8 x 7 = 50	7 x 6 = 42	0 x 4 = 0	7 x 9 = 63
2 x 9 = 18	9 x 3 = 36	7 x 4 = 32	7 x 3 = 21	3 x 6 = 18	0 x 8 = 8	5 x 6 = 30
9 x 6 = 54	6 x 2 = 12	7 x 0 = 0	3 x 5 = 15	2 x 8 = 16	4 x 2 = 8	4 x 0 = 0

for teacher to fill out

63 problems _____ wrong _____ correct