5th Grade Math Cheat Sheet

5th Grade Mathematics Times Table Chants

and Summer Practice Work!

3s CHANT *MULTIPLES OF 3*

3, 6, 9, 12, 15, 18, 21, 24
Listen to us Green Woods

27, 30, 33, and 36
Uh-huh… we got to keep on moving

4s CHANT *MULTIPLES OF 4*

4, 8, 12, 16, 20, 24
That's how we roll our fours

28, 32, 36, 40, 44, 48
La-la La- la LA!

6s CHANT (Set to the tune of "Itsy Bitsy Spider") *MULTIPLES OF 6*

6, 12, 18, 24, 30, 36

And the spider says….

42, 48, 54, 60 (say these fast)
42, 48, 54, 60

66, 72
How do you do? (shake hands)

66, 72
How do you do? (shake hands)

Times Tables Chants
Continued

7s CHANT *MULTIPLES OF 7*

7, 14, 21, 28, 35, 42

→ ← → ←
49, 56, 63, 70 (waving back and forth)

77, 84

I want some more!

8s CHANT *MULTIPLES OF 8*

8, 16, 24, 32, 40 (4-dee)

Got the forties down here.
Got the forties up there.

48 (clap, clap), 56 (clap, clap)

64, 72, 80 (8-dee)

Got the eighties down here.
Got the eighties up there.

88 (clap, clap), 96 (clap, clap)

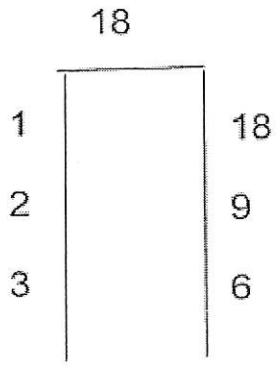
9s CHANT *MULTIPLES OF 9*

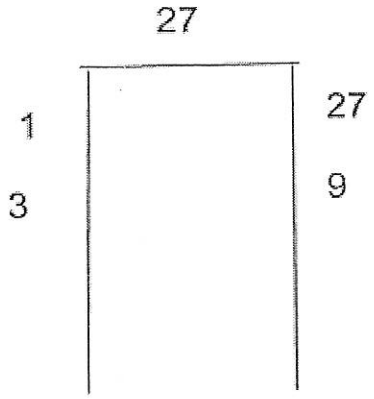
9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, 108

BOOM! Chaca- Laca!

Factors (You use factors to REDUCE fractions!)

Go shopping for Factors. Don't forget the aisles!





Factors of 18 and 27 = 1, 3, 9

GCF of 18 and 27 = 9

Steps to Making Baby Fractions *(Reducing Fractions to Lowest Terms)*

Fact #1 - Find the factors of both the numerator and the denominator.

Fact #2 - Find the greatest common factor (GCF).

Fact #3 - Divide the numerator and the denominator by the GCF.

Reduce: $\frac{18}{27} \quad \frac{\div 9}{\div 9} = \frac{2}{3}$

Mixed Number	Improper Fraction **(big headed baby)**
$8\ \frac{2}{5}$	$\frac{42}{5}$

To change an **improper fraction** into a mixed number, **turn the fraction into a division problem.** *The numerator ALWAYS goes in the house.*

$$5\overline{)42}\quad 8\ \tfrac{2}{5}$$
$$-40$$
$$2$$

To change a mixed number into an improper fraction, Multiply the whole number by the denominator and add the numerator. That number becomes the numerator. The denominator stays the same.

$$\frac{(8 * 5 + 2)}{5} = \frac{42}{5}$$

To add, subtract, or compare fractions-- they need to speak the same language. (the **DENOMINATORS** do, anyway)

1) Find the Least Common ***Multiple*** of the 2 denominators
2) Create equivalent fractions
3) Add, subtract, or compare the numerators

Multiples of
10: 10, 20, 30
2: 2, 4, 6, 8, 10, 12, 14
Least Common Multiple = 10 (LCM)

$\rightarrow \frac{9}{10} \frac{*1}{*1} = \frac{9}{10}$

-

$\rightarrow \frac{1}{2} \frac{*5}{*5} = \frac{5}{10}$

> Now that the denominators are the same, work with the Numerators!

$\frac{4}{10}$ (Then, you can reduce :)

$$\frac{4 \div 2}{10 \div 2} = \frac{2}{5}$$

Multiplying Fractions

½ * 10 is is the same as adding ½ ten times!

½ + ½ + ½ + ½ +½ +½ + ½ + ½ + ½ +½ = 5

Fact #1 - The word "of" means multiply.

Fact #2 - Put a one under the whole number.

Fact #3- Shoot, shoot, and reduce (Multiply the numerators; Multiply the denominators)

Fact #4 - Make the improper fraction into a whole number

What is ½ of 10?

$\frac{1}{2} * \frac{10}{1} = \frac{10}{2}$ ← Big headed baby!

$2\overline{)10}$ → 5

½ of 10 = 5

What is ½ of ½ ?

$\frac{1}{2} * \frac{1}{2} = \frac{1}{4}$

Dividing Fractions

There's ⅓ of a cake. 9 people would like to share it equally. That means... splitting up ⅓ into 9 smaller pieces.

⅓ (of the cake) ÷ 9 (people)

Dividing fractions steps:

1) Turn whole numbers or mixed numbers into an improper fractions (if you need to)

2) The number you're starting you're dividing up comes FIRST; The number of pieces you're splitting it into comes SECOND

3) Flip the divisor (second number) and multiply across!

⅓ ÷ 9

$\frac{1}{3} \div \frac{9}{1}$ ↰

$\frac{1}{3} * \frac{1}{9} = \frac{1}{27}$

⅚ ÷ ½

$\frac{5}{6} \div \frac{1}{2}$ ↰

$\frac{5}{6} * \frac{2}{1} = \frac{10}{6}$

$1\frac{4 \div 2}{6 \div 2} = 1\frac{2}{3}$

$6\overline{)10}$ → $1\frac{4}{6}$

-6

4

Changing Fractions to Decimals to Percents

Fraction	Decimal	Percent
$\frac{4}{5}$ The numerator ALWAYS goes in the house! $5\overline{)4.0}$	0.8	80% Move the decimal to the right 2 digits
$\frac{5}{100} = \frac{1}{20}$	0.05 Say its name to turn it into a fraction "5 HUNDREDTHS"	5%

*Changing a **Fraction** to a **Decimal**: Put the **NUMERATOR** in the house!*

*Changing a **Decimal** to a **Percent**: Move the decimal **2 PLACES** to the right!*

Pre-Algebra

Step #1 – The VARIABLE (unknown letter) wants to be alone (to use the phone, to call Tyrone)

Step #2 – Opposites knock each other out. (Use the opposite operation to get the variable alone.)

Step #3 – What's good for the goose is good for the gander. (What you do on one side of the = you have to do on the other!)

$X + 12 = 68$
$-12 \quad -12$

$X = 56$

Then, Check it!

$X = 5$

What is $120 \div X$?

↑ Substitute "X" for 5

$120 \div 5$

$5\overline{)120}$ → 024

$-10\downarrow$

20

-20

0

24

The Division Dance!

We've got to divide, divide.
We've got to multiply, multiply, multiply;
We've got to subtract, We've got to subtract.
We've got to bring it down; We've got to bring it down.
Then, we've got to do it all over again

729/9 is the same as $9\overline{)729}$

*(cause the **numerator always goes inside** the house!)*

$$\begin{array}{r} 081 \\ 9\overline{)729} \\ -72\downarrow \\ \hline 09 \\ -9 \\ \hline 0 \end{array}$$

Dividing Decimals

Fact #1 – If your divisor is a whole number, pop up the decimal through the "house" roof.

$$\begin{array}{r} 08.2 \\ 2\overline{)16\uparrow.4} \\ -16\downarrow \\ \hline 04 \\ -4 \\ \hline 0 \end{array}$$

Fact #2 – When your divisor is a decimal, remember this story...
The dog (Spot) runs away from the cat. For every step forward the cat goes, the dog (Spot) backs up. Once the cat gets to the door the dog (Spot) goes up through the roof

Fact 2:

$$\begin{array}{r} 06.0 \\ 0.6\overline{)36.0\uparrow} \\ -36\downarrow \\ \hline 00 \end{array}$$

*If there is no decimal, you put it to the right of the one's place

Example: $36 = 36.0$

That's where the decimal goes!

Writing Remainders As a Decimal

12 ÷ 8

$$\begin{array}{r} 1.5 \\ 8\overline{)12.0} \\ -8\downarrow \\ \hline 40 \end{array}$$

① Put a decimal to the right of the ones place
② Bring down zeros

As a Fraction

This is the whole number → 1

$$\begin{array}{r} 1\ \frac{4}{8} \\ 8\overline{)12} \\ -8 \\ \hline 4 \end{array}$$

The divisor is the denominator

← The remainder becomes the numerator

$1\frac{4}{8}$

Decimals don't need to be lined up when multiplying!

Multiplying Decimals

1) Multiply as usual -- DON'T LINE UP THE DECIMALS
2) Count the number of places behind each decimal point
3) Add the numbers from step 2
4) Slide, Slide, Slippity Slide.

This time the decimal goes for a ride!

1.6 (1) → Move the decimal 3 places
*.23 (2)
48
320 ☺ ← don't forget your place holder!
.368
0.368

Adding & Subtracting Decimals

1) LINE UP THE DECIMALS!
2) Pop the decimal down
3) Add or subtract as usual

Put in 0's as place holders

$$\begin{array}{r} 1.60 \\ +\ .23 \\ \hline 1.83 \end{array}$$

Line up the decimals when adding + subtracting.

Geometry:

All 3 angles of a triangle = 180^0

All 4 angles of a quadrilateral = 360^0

Area= the squares of carpet in a room

Area of a quadrilateral = Length * Width

Perimeter = the length of a fence around a yard

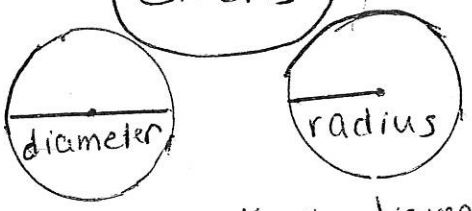
Add up the lengths of all the sides

Volume = the cubes inside a box

Volume = Length * Width * Height

Or... find the Area of a face & multiply that by the height

Circles $\pi = 3.14$



radius = ½ the diameter

Circumference = the perimeter of the circle

$C = 2\pi * radius$

$A = \pi * radius^2$

↑ radius * radius

Order of Operations (PEMDAS)

Parenthesis
Exponents
Multiplication or **D**ivision (*go left to right*)
Addition or **S**ubtraction (*go left to right*)

mean, median, mode, range

4)M + e + a + n

To find the mean (or average) add up all the numbers and divide by the amount of numbers in the set.

M E D I A N

To find the median. Order the numbers from least to greatest and find the middle number in the set. If there are 2, find the mean of the two numbers

Mode mode mode
Mean median
Mode mode mode

The mode is the number that occurs the most often in a set of data.

Maximum
- Minimum
Range

To find the range, subtract the smallest number from the largest number.

Rounding: Remember CUBA

Circle the place you're rounding

Underline the digit to the right

Baby or Bully? (Is the underlined number a baby or a bully? Baby= 4 and lower; Bully = 5 and higher)

Add **zeros** to the right of the circled number if it's a **baby**;

Add +1 to the circled number if it's a **Bully**

Round 65.14 to the tens place	Round 65.14 to the tenths place
65.14 +1 Bully; 65.14 rounds to 70	65.14 Baby; 65.14 rounds to 65

Steps for Solving Word Problems: Remember CUBESA

Circle the numbers you need

Underline the question

Box any math action words

Evaluate the steps

Solve and Check

Answer in a sentence

Summer Math Review Word Problems

1. A large box contains 18 small boxes and each small box contains 25 chocolate bars. How many chocolate bars are in the large box?

2. It takes John 25 minutes to walk to the car park and 45 to drive to work. At what time should he get out of the house in order to get to work at 9:00 a.m.?

3. Kim can walk 4 kilometers in one hour. How long does it take Kim to walk 18 kilometers?

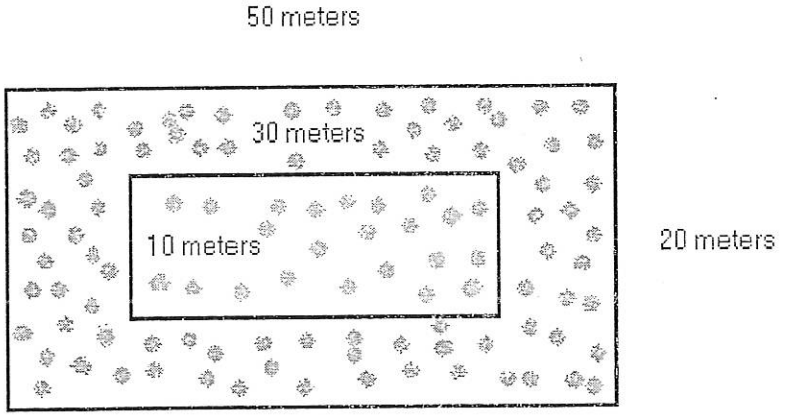
4. A factory produced 2300 TV sets in its first year of production. 4500 sets were produced in its second year and 500 more sets were produced in its third year than in its second year. How many TV sets were produced in three years?

5. Linda bought 3 notebooks at $1.20 each; a box of pencils at $1.50 and a box of pens at $1.70. How much did Linda spend?

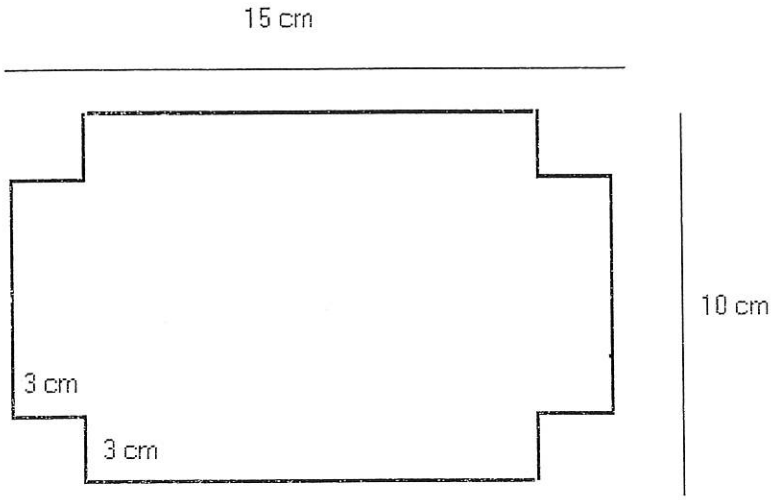
11. Mel had $35 and withdraw some more money from his bank account. He bought a pair of trousers at $34.00, two shirts at $16.00 each and 2 pairs of shoes at $24.00 each. After the shopping, he had $32.00 left. How much money did Mel withdraw from the bank?

12. How many minutes are in one week?

13. In Tim's house, a rectangular swimming pool (blue) whose length 30 meters and width 10 meters is surounded by grass (green). The pool with the grassy area make a large rectangle whose length is 50 meters and width 20 meters. What area is occupied by the grass?



14. Mary wants to make a box. She starts with a piece of cardboard whose length is 15 centimeters and with is 10 centimeters. Then she cuts congruent squares with side of 3 centimeters at the four corners. What is the area of the cardboard after she cuts the 4 corners?



15. A painter charges $ 225 for materials and $ 35 per hour for labour. The total cost of painting an office is $ 330. How many hours did it take the painter to paint the office?

16. Three toy cars and 4 toy trains cost $18. Two toy cars and 3 toy trains cost $13. What is the price of one toy car and the price of one toy train if both prices are whole numbers of Dollars? (Hint: Use a table)

Show your work! Show your work! Show your work!

Name _____

Summer Review -

Complete each of the problems below. Please show all of your work.

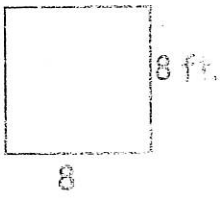
1) Reduce each of the following fractions:

a) $\frac{10}{15} =$ ___ b) $\frac{8}{12} =$ ___ c) $\frac{20}{30} =$ ___ d) $\frac{6}{9} =$ ___

e) $\frac{4}{6} =$ ___ f) $\frac{12}{14} =$ ___ g) $\frac{25}{50} =$ ___ h) $\frac{16}{20} =$ ___

2) Find the perimeter and area of the figures:

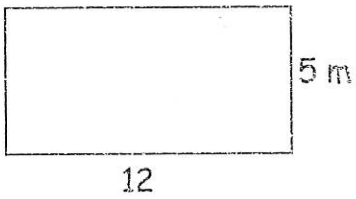
a)



P =

A =

b)



P =

A =

3) Find the greatest common factor (GCF) of the following sets of numbers:

a) 3, 4 b) 5, 10 c) 12, 26 d) 8, 12

4) If M = 10, simplify each of the following:

a) M + 6 b) M - 7 c) 15 - M d) 4M

5) Change the following fractions to mixed numbers:

a) $\frac{24}{7} =$ ___ b) $\frac{13}{2} =$ ___ c) $\frac{18}{10} =$ ___ d) $\frac{7}{5} =$ ___

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

6) Fill in the table with the corresponding fractions, decimals, and percents:

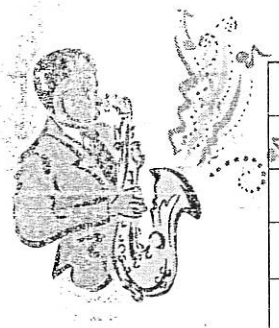
	Fractions	Decimals	Percents
a)	$\frac{1}{2}$	.5	50%
b)	$\frac{4}{25}$		%
c)	$\frac{4}{5}$		%
d)	___	.3	%

	Fractions	Decimals	Percents
j)	___	.42	%
k)	___	.56	%
l)	___		68%
m)	___		85%

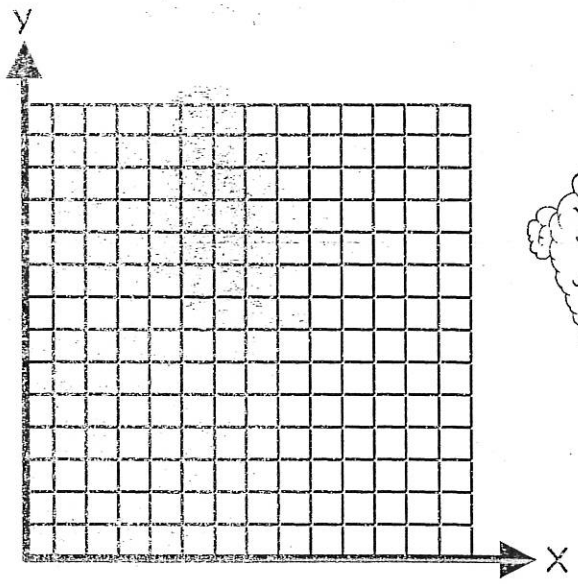
7) Change the following mixed numbers to improper fractions:

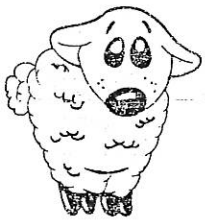
a) $3\frac{1}{8} =$ ___ b) $5\frac{4}{7} =$ ___ c) $9\frac{1}{11} =$ ___ d) $4\frac{2}{7} =$ ___

8) Graph each of the points.



X	Y
0	8
1	7
2	6
3	5
4	4
5	3
6	2
7	1





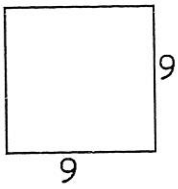
9) Maria has three red dresses, 2 white dresses, and one blue dress. What is the probability she will wear a blue dress at her party?

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

5) Find the perimeter and area of the figures:

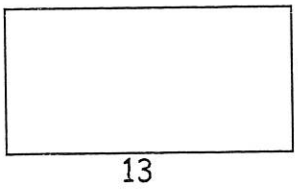
a)



P =

A =

b)

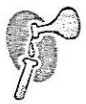


P =

A =

6) Find the greatest common factor (GCF) of the following sets of numbers:

a) 18, 27 b) 36, 40 c) 42, 50 d) 8, 15



7) Find the value of the variable

a) $N + 18 = 36$

$N =$

b) $24 - X = 2$

$X =$

c) $X \div 5 = 20$

$X =$

d) $T * 8 = 640$

$T =$

8) Change the following fractions to mixed numbers:

a) $\frac{23}{8} =$ ____ b) $\frac{14}{3} =$ ____ c) $\frac{19}{11} =$ ____ d) $\frac{8}{7} =$ ____

e) $\frac{17}{9} =$ ____ f) $\frac{27}{8} =$ ____ g) $\frac{35}{3} =$ ____ h) $\frac{9}{4} =$ ____

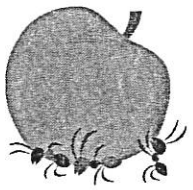
9) Find the least common multiple (LCM) of the following sets of numbers:

a) 5, 6 b) 7, 8 c) 12, 15 d) 20, 30

10) Find the mean, median, mode, and range of the following set of numbers: 5, 5, 7, 5, 9, 11, 18

mean = median =

mode = range =



Show your work! Show your work! Show your work!

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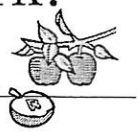
6) Fill in the table with the corresponding fractions, decimals, and percents:



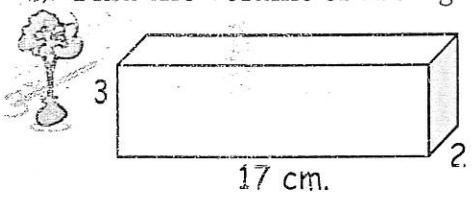
	Fractions	Decimals	Percents
a)	$\frac{1}{4}$		%
b)	$\frac{7}{20}$		%
c)	$\frac{35}{50}$		%
d)	___	.31	%

	Fractions	Decimals	Percents
j)	___	.88	%
k)	___	.11	%
l)	___		78%
m)	___		22%

7) Change the following mixed numbers to improper fractions:

a) $1\frac{2}{5} =$ ____ b) $2\frac{3}{10} =$ ____ c) $3\frac{5}{12} =$ ____ d) $4\frac{3}{11} =$ ____

8) Find the volume of the figures:



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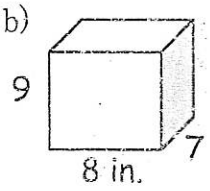
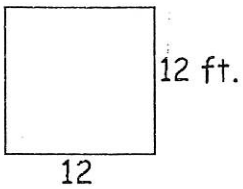
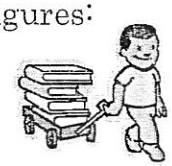


V = _____ V = _____

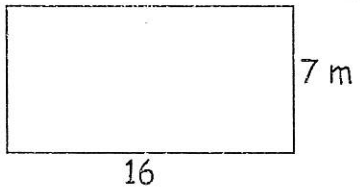
9) Find the perimeter and area of the figures:

a)





b)



P =

A =

P =

A =

Show your work! Show your work! Show your work!

Decimals: Multiplying

Name _____

Find each product.

Factor	.4 (1)	1 dec. place
Factor	× .6 (1)	1 dec. place
Product	.24	2 dec. places

1. Multiply as you would whole numbers.
2. The number of decimal places in the product is the sum of the decimal places in the factors.

TIP: *When the problem is presented horizontally (see the one below), make sure to line up the numbers on the right. Do not line up the decimal points.*

.58 × 0.7

Correct

.58
× 0.7

Don't line up the decimals when you multiply!

Incorrect

.58
× 0.7

---

1. .8 × 4
2. .5 × .7
3. 3.9 × 0.7
4. 3.17 × 0.9
5. 2.54 × 7
6. .04 × .96
7. 9.1 × .22
8. 2.9 × 6.4
9. 6.39 × .65
10. 45.1 × .002
11. 8.23 × .004
12. 35.2 × 4.95

13. 43 × 3.7 =
14. 4.3 × 3.7 =
15. 0.43 × 3.7 =
16. 0.43 × 0.37 =
17. 0.04 × 0.03 =
18. 0.051 × 6 =
19. 0.15 × 0.05 =
20. 42 × 0.006 =

Name _____

Fractions: Adding and Subtracting

Find each sum or difference. Write all answers in lowest terms.

$$\begin{array}{r} \frac{2}{3} \times \frac{4}{4} = \frac{8}{12} \\ + \frac{1}{4} \times \frac{3}{3} = \frac{3}{12} \\ \hline \frac{11}{12} \end{array}$$

1. Find the lowest common denominator, also known as the LCD, of both denominators.
2. Write equivalent fractions using the LCD.
3. Add or subtract the fractions, and reduce if necessary.

---

1. $\begin{array}{r} \frac{7}{12} \\ - \frac{1}{4} \\ \hline \end{array}$

2. $\begin{array}{r} \frac{1}{8} \\ + \frac{5}{6} \\ \hline \end{array}$

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

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

5. $\begin{array}{r} \frac{2}{3} \\ - \frac{1}{10} \\ \hline \end{array}$

6. $\begin{array}{r} \frac{2}{5} \\ + \frac{2}{3} \\ \hline \end{array}$

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

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

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

10. $\begin{array}{r} \frac{5}{6} \\ - \frac{2}{3} \\ \hline \end{array}$

11. $\begin{array}{r} \frac{1}{16} \\ + \frac{7}{8} \\ \hline \end{array}$

12. $\begin{array}{r} \frac{3}{10} \\ + \frac{2}{5} \\ \hline \end{array}$

13. $\begin{array}{r} \frac{1}{6} \\ - \frac{1}{9} \\ \hline \end{array}$

14. $\begin{array}{r} \frac{4}{7} \\ + \frac{1}{4} \\ \hline \end{array}$

15. $\begin{array}{r} \frac{9}{10} \\ + \frac{5}{8} \\ \hline \end{array}$

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

THINK ABOUT IT!

17. Estimate each comparison. Use <, >, or =.

a. $\frac{9}{10} - \frac{4}{9} \bigcirc 1\frac{1}{5} - \frac{4}{5}$

b. $\frac{53}{100} \bigcirc \frac{6}{11} + \frac{7}{13}$

Ratio & Percent: Percent of a Number Name _____

Find the percent of each number.

① Change the Percent to a decimal
② Multiply
③ Don't forget your decimal in the answer!

51% of 80
$.51 \times 80$
40.8

1. 50% of 24
2. 10% of 20
3. 25% of 24
4. 6% of 60
5. 40% of 50
6. 5% of 60
7. 20% of 25
8. 24% of 30
9. 15% of 20
10. 35% of 70
11. 50% of 36
12. 30% of 90
13. 10% of 80
14. 40% of 26
15. 4% of 50
16. 40% of 100
17. 25% of 62
18. 90% of 30
19. 10% of 150
20. 50% of 88
21. 33% of 200

THINK ABOUT IT!

22. Write <, >, or =.

a. 100% of 55 ◯ 55 b. 85% of 55 ◯ 55 c. 125% of 55 ◯ 55

Multiplying Decimals

1. 0.06×0.3

   1
   0.06 (2)
   × 0.3 (1)
   018
   + 000☺
   0.018

2. 0.006×0.4

3. 325×0.0002

4. 0.63×0.05

5. 4.3×0.004

6. 0.016×2.1

7. 0.005×0.06

8. 0.013×1.1

9. 0.0012×5.4

10. 538×0.01

11. 0.007×0.07

12. 45.05×0.08

13. 0.08×0.015

14. 0.25×0.054

15. $47.6 \times .042$

16. $312 \times .0624$

17. 0.205×8.67

18. 5.75×0.075

19. $800.6 \times .043$

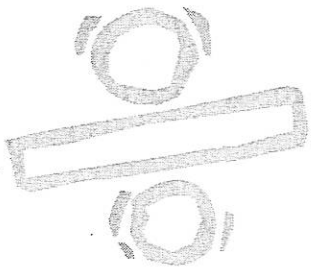
20. $.0314 \times 26$

Decimals: Dividing by Decimals

Name _____

Find each quotient.

$48 \div .6$



$6.\overline{)48}$

$6\overline{)48.0}$

$\begin{array}{r} 80. \\ 6\overline{)480} \\ \underline{480} \\ 0 \end{array}$

1. Change the divisor to a whole number by moving the decimal point to the right.
2. Move the decimal point in the dividend the same number of spaces. Add zeros if necessary.
3. Divide the same way as whole numbers. Remember: Bring the decimal point up in the quotient.

---

1. $\begin{array}{r} 07. \\ .5\overline{)3.5} \\ \underline{35} \\ 0 \end{array}$

2. $1.6\overline{).768}$

3. $2.2\overline{)8.36}$

4. $.5\overline{)32.05}$

5. $3.1\overline{)19.84}$

6. $4.6\overline{)23.92}$

7. $.64\overline{)4.672}$

8. $.34\overline{).782}$

9. $7.2\overline{)117.36}$

10. $.81\overline{)1.701}$

11. $5.4\overline{)39.42}$

12. $.03\overline{).48}$

13. $1.24\overline{)76.88}$

14. $3.2\overline{)185.6}$

15. $.16\overline{)72}$

16. $.8\overline{)6.016}$

Name _____

Fractions: Multiplying Fractions and Mixed Numbers

Find each product. Reduce.

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

$\frac{5}{3} \not\rightarrow \frac{6}{1} = \frac{30}{3} = 10$

1. Change each mixed number to an improper fraction.
2. Multiply the numerators.
3. Multiply the denominators.
4. Reduce if possible.

TIP: *You can reduce first by dividing a numerator and denominator by a common factor. This is called cross cancellation.*

---

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

THINK ABOUT IT!

21. If the product of two different numbers equals 1, then one of the numbers is greater than one and the other number is _____. Give an example to support your answer.

Name _____

Fractions: Dividing Fractions and Mixed Numbers

Find each quotient. Reduce.

$2\frac{9}{10} \div 3\frac{1}{2}$

$\frac{29}{10} \div \frac{7}{2}$

$\frac{29}{10} \times \frac{2}{7} = \frac{29}{35}$

1. Write the mixed numbers (or whole numbers) as improper fractions.
2. To divide fractions, flip the second one and then multiply.
3. Reduce.

MATH FACTS

Have you ever wondered how much you'd weigh on the Moon, or Mars? With math knowledge, you can. In fact, with math you can figure out how much you'd weigh on Saturn's rings, assuming you could stand on them, of course.

TIP: *Remember that a whole number can be written as a fraction by placing it over one.* $6 = \frac{6}{1}$

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

Ratio & Proportion: Solving Proportions

Name _____

Solve each proportion.

$$\frac{3}{4} = \frac{n}{32}$$

$4 \times n = 3 \times 32$

$n = 96 \div 4$

$n = 24$

A proportion is two equal ratios. To solve:

1. Find the cross products.
2. Division undoes multiplication to solve for n.

---

1. $\frac{4}{5} \overset{*12}{\underset{*12}{=}} \frac{n}{60}$ $n=48$

2. $\frac{3}{4} = \frac{n}{100}$

3. $\frac{1}{2} = \frac{n}{20}$

4. $\frac{2}{5} = \frac{n}{35}$

5. $\frac{2}{8} = \frac{n}{80}$

6. $\frac{4}{5} = \frac{n}{75}$

7. $\frac{3}{10} = \frac{n}{60}$

8. $\frac{3}{5} = \frac{n}{35}$

9. $\frac{1}{4} = \frac{n}{32}$

10. $\frac{4}{8} = \frac{n}{100}$

11. $\frac{4}{5} = \frac{n}{45}$

12. $\frac{1}{8} = \frac{n}{48}$

13. $\frac{1}{2} = \frac{n}{16}$

14. $\frac{3}{2} = \frac{n}{50}$

15. $\frac{3}{8} = \frac{n}{56}$

16. $\frac{7}{12} = \frac{n}{120}$

17. $\frac{7}{5} = \frac{n}{60}$

18. $\frac{5}{8} = \frac{n}{64}$

19. $\frac{5}{6} = \frac{n}{66}$

20. $\frac{5}{8} = \frac{n}{32}$

21. $\frac{4}{3} = \frac{n}{45}$

22. $\frac{7}{8} = \frac{n}{72}$

23. $\frac{7}{3} = \frac{n}{21}$

24. $\frac{9}{6} = \frac{n}{4}$

THINK ABOUT IT!

25. Without solving, tell whether n is more than or less than 50.

A. $\frac{6}{15} = \frac{n}{100}$

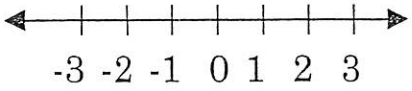
B. $\frac{22}{40} = \frac{n}{100}$

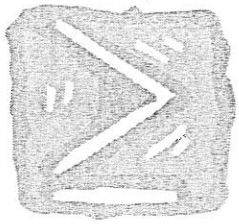
C. $\frac{12}{25} = \frac{n}{100}$

Part 1: Compare. Use <, >, or = for each ◯ .

When comparing integers, the integer that is further to the right on the number line has the greater value.

-2 ◯ -3



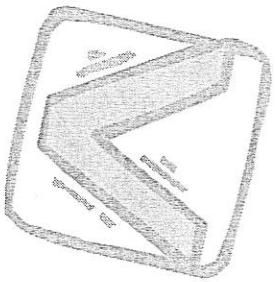


-2 is further to the right, so -2 > -3.

1. -4 ◯ 0	2. -6 ◯ -3	3. 0 ◯ -2
4. 1 ◯ -8	5. 4 ◯ -4	6. -3 ◯ -3
7. -11 ◯ -25	8. 6 ◯ 0	9. 5 ◯ -14
10. 1 ◯ -3	11. -7 ◯ -4	12. -3 ◯ -1

Part II: Order from least to greatest

To order from the least to greatest, place them as they would belong on a number line.

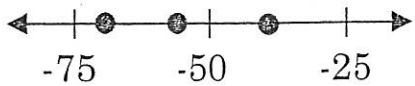


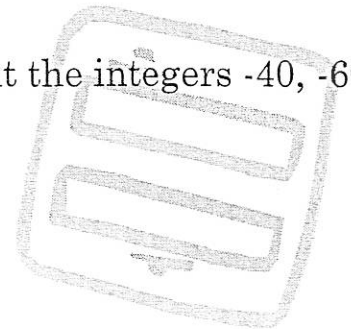
13. -2, -6, 1, 0, -8, -4
14. 0, -8, 3, 4, -2
15. 15, -5, 1, -1, 0, 9
16. -2, -7, 0, 11, 7, -14
17. 2, -3, 1, -1, 6, -4
18. 6, -5, -1, 0, 4, -4

THINK ABOUT IT!

19. The three points marked on the number line represent the integers -40, -60, and -70. Which integer is point X? Y? Z?

X Y Z



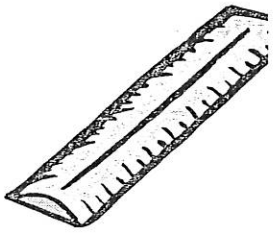


Measurement: Length in the Customary System

Name _____

Study the chart below to answer the questions.

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet or 1,760 yards



TIP: *When changing from a smaller unit to a larger one (inches to feet), divide. When changing from a larger unit to a smaller one (feet to inches), multiply.*

Change each measure to inches.

1. 3 ft
2. 4 yd
3. 2 ft 4 in
4. 9 yd
5. 5 yd 1 ft
6. 120 ft
7. 8 yd
8. 10 ft 7 in

Change each measure to feet.

9. 6 yd
10. 2 mi
11. 72 in
12. 3 yd 1 ft
13. 48 in
14. 5 yd 2 ft
15. $1\frac{1}{2}$ mi
16. 96 in

Write each measure as yards and feet.

17. 37 ft
18. 84 in
19. 22 ft
20. 5 ft 24 in

Write each measure as feet and inches.

21. 28 in
22. 45 in
23. $6\frac{1}{4}$ yd
24. 6 yd 30 i