COMPARING FRACTIONS

Common Core Standard 3NF3D – Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Verse 1
These fractions right here (1/2 and 1/8) I can compare
Compare any fractions anytime, anywhere
Numerators the same, check out denominators
Which one is greater? Which one is smaller?
Look at two whole pizzas, cut them up in equal pieces
One made of two pieces, the other has eight
Which one is greater? Which one is less?
Eight equal pieces is smaller than two equal pieces
Cut from a pizza

Chorus
A fraction is something that's cut up into equal parts
Comparing, comparing two fractions this is where you start
Numerator the same, look at denominators
Which one is bigger? That fraction is smaller

Verse 2
When comparing fractions
I have to use greater than, less than, or equal to
Look at the numerators, they're the same so I look at the bottom, oooh
I'll give an example: we both have an apple pie
I cut mine up in 5 equal pieces, you cut yours up into 3 equal pieces
Now take a look and see
At what fractions we have, I have 1/5, you have 1/3
1/5 is less than 1/3
Because if you take one of my pieces and one of yours
My piece is smaller (yep) comparing, comparing, comparing
I'll draw a picture to show all my work

Make diagrams, it will help, it won't hurt

Chorus
A fraction is something that's cut up into equal parts
Comparing, comparing two fractions this is where you start
Denominators are the same, check numerators
Which number is bigger? That fraction is bigger

Verse 3
When comparing fractions
I have to use greater than, less than, or equal to
Look at denominators they're the same so I look at the top
Here's an example: 2/8 and 4/8
These fractions show how much cake we ate
Which one is less and which one is greater?
Since we can see the bottoms are the same
The fraction is greater with the bigger numerator
2/8 is less than 4/8, you can do fractions anytime, anyplace.

Chorus
A fraction is something that's cut up into equal parts
Comparing, comparing two fractions this is where you start
Numerators the same, look at denominators
Which one is bigger? That fraction is smaller.
A fraction is something that's cut up into equal parts
Comparing, comparing two fractions this is where you start
Denominators the same, check numerators
Which one is bigger? That fraction is bigger

PLACE VALUE

Common Core Standard 3.NBTA 2 – Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Chorus
Ones, tens, hundreds, thousands
I know my place
Ten thousand, hundred thousand, millions
I know my place value

Verse 1
When you're reading numbers look at the place value
A number in a different place gives a different value
The number 4,444
Let's talk about the value of each 4
The 4 in the thousands place
Means 4 thousands
That's 4,000
The 4 in the hundreds place
Means 4 hundreds
That's 400
The 4 in the tens place means 4 tens
So you have 40 now
The 4 in the ones place means you have 4 ones
So you have 4
Now when you expand
You would have 4,000 + 400 + 40 + 4
The tens place is ten times bigger than the ones place, let's go
Move left
The hundreds place is 100 times bigger than the ones place, let's go
Move left

The thousands place is 1,000 times bigger
Than the ones places, let's go

Chorus (x2)

Verse 2
29,365
Time to break it down right
Since 2 is in the ten thousands place
That's 20,000, move to the right
Since 9 is in the thousands place
That's 9,000, reading numbers ain't nothing
Got 3 in the hundreds place that's like $300
Got them yelling 300
A 6 in the tens place is like having 6 ten dollar bills
That's 60
A 5 in the ones place is like having 5 one dollar bills
5 stay with me
As we expand
That's 20,000 + 9,000 + 300 + 60 + 5
When you add it up you get 29,365
Yeah
To the left, place value get 10 times bigger every time you move left
To the left, to the left
Place value gets 10 times bigger every time you move left.

Chorus (x2)

ROUNDING

Common Core Standard 3.NBTA 1 – Use place value understanding to round whole numbers to the nearest 10 or 100.

Chorus
If it's 4 or less, round down
If it's 5 or more, round up
If it's 4 or less, round down
If it's 5 or more, round up
The place value that you want to change
Look to the right, look to the right
If it's 4 or less, round down
If it's 5 or more, round up

Verse 1
Mr. D what do you do when It's time to round?
First we check the place value when it's time to round
Ok I want to round to the nearest 10
Then you gotta check the number to the right of it
All right let's check the number 23
2 is in the tens place so look at the 3
Well do I round up or do I round down?
3 is less than 4 so you round down
Remember, since we're talking about the tens
The number to the right gets smaller kid
Turn the digit to a zero
Stay with me
The number 23 rounds down to 20
I get it
I want to try number 27
2 is in the tens place so I look at 7
7 is greater than 5 so I round up
27 turns to 30
That's what's up!

Chorus

Verse 2
Mr. D I want to round to the nearest hundred
So you gotta check the number in the tens place
Alright I have the 328
Remember place value 2 is in the tens place
Let me guess. I think I have to round down
Yep, 2 is less than 4 so you round down
The hundreds place stays the same
But the tens place and the ones place
Both of them you have to change to 0
Why? Because you round down
Oh this is easy
I got it now
It's 300
Let me try one my own
I'll do 564
6 is in the tens place so I round up
The 5 turns to a 6
I got this
The last two digits turn to zeros
564 rounds to 600, we know

Chorus

EQUIVALENT FRACTIONS

Common Core Standard 4.NFA 1– Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

Intro
1/2 and 2/4, equivalent fractions
2/3 and 4/6, equivalent fractions
8/12 and 2/3 equivalent fractions
6/10 and 3/5, equivalent fractions

Verse 1
Take any fraction multiply your numerator
By a number greater than 1
Then take the same number, multiply with the denominator
Get a fraction that's equivalent
Let's look at 3/5
Multiply by 2 over 2, get 6 over 10
So 3/5 and 6/10 are equivalent
Pick a number multiply with your numerator and denominator
For equivalent fractions
Mr. D drove half a mile
Cut the mile into 2 equal parts, I drove 1 space
Multiply by 4 over 4
You get 4/8 of a mile that's Mr. Q-U-E's place
Mr. Q's mile is cut in 8 equal parts
Then he went 4 spaces, let's see where we are
Mr. D and Mr. Q
Went the same distance
What it means is 1/2 and 4/8 are equivalent

Chorus
Just gotta multiply or you can divide

This is how you can find equivalent fractions
They have the same value
Multiply or divide
This is how you can find equivalent fractions

Verse 2
Take a fraction
Divide the numerator by a factor that is greater than 1
That it shares with the denominator
Then you gotta take the same factor
And divide with the denominator
Try 5/10
Divide by 5 over 5, get 1 over 2
So 5/10 and 1/2 are equivalent
Take your factor and divide it
With the numerator and denominator for equivalent fractions
If a pizza was cut in 6 equal slices and you took 4
Is it the same amount
If it was cut in 3 equal slices and you took 2
Let's see if 4/6 and 2/3 are equivalent
4/6 divide by 2 over 2 is 2/3
So 4/6 and 2/3 are equivalent
It's the same amount of pizza 'cause it's part of a whole
So it means that the portions are equivalent

Chorus

BASIC MEASUREMENT

Common Core Standard 4.MDA 1 – Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

Verse 1
Face it, some measurements are basic
Everything you must know
Imma teach you, fa sho
Look, let's go on a trip
Learn some basic measurement
A kilometer is 1000 meters
A meter is 100 centimeters
Picture this
1 meter is a little longer than 3 rulers, kids
A centimeter is about the size of a fly
A kilometer is super real
It's about the size of 11 football fields

Chorus
Distance, what is the length? Kilometer, meters, centimeters
Basic measurements
Time, how do we measure this? Hours, minutes, seconds
Basic measurements
Weight, how do we measure this? Kilograms, grams, pounds, and ounces
Volume, how much space is it? Liters and milliliters
Basic measurements

Verse 2
Time is measured in minutes, hours, and seconds
A minute is 60 seconds
An hour is 60 minutes
You get it
Let's talk about weight now
What are the units that we use to break the weight down?
Kilogram, grams, pounds, and ounces
A kilograms, 1000 grams
A pound is 16 ounces, understand?
A dollar bill weighs about a gram

Volume, come on let's turn up the volume
It's time to learn the measurements we use for volume
Liters and milliliters
1000 milliliters is 1 liter
20 drops of water is a milliliter

Chorus (x2)

MATH REASONING

Common Core Standard 3.OA 8 – Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Chorus
When I do a problem
I gotta do, gotta do more than just solve it
Does my answer make sense? Does my answer make sense?
When I do a problem
I gotta do, gotta do more than just solve it
Does my answer make sense? Does my answer make sense?

Verse 1
Check it, I am a mathematician
When I do my work, you know I'm on a mission
I do a problem, then I check my work
Does my answer make sense?
Is it reasonable?
That's the question that I ask every time I do math
I never do a problem and move to the next
Without asking myself, "Does it make sense?"
I can explain to a partner, too
When you finish your work
That's what you're supposed to do, yup
I c-c-cannot quit
When it comes to math, I'll never be content
Yes! I am it
And I always make sure my answers make sense
When you work with numbers that are compatible
That's how you know your answer is reasonable

Chorus

Verse 2
When you step into class don't disrespect
You can solve any problem, that's a bet
Guess and check is what you need to do
When you're solving a problem and you aren't sure what to do
I solve a problem and I do more than just work it out
I ask myself questions after I answer questions
Yes, I do mental computations
But I also show my work
Double checking all my work
"Hmmm, is it reasonable?"
That's the question that I ask
Every time I do my math
"Hmmm, is it reasonable?"
Take advantage of estimation in certain math situations
Yep, does it make sense?
That's what I ask myself when I'm solving it
And after I show my work I justify
Then I get in front of the class and testify

Chorus

WORD PROBLEMS

Chorus (x2)
First read the problem
Then underline the question
Can't solve the problem
If you don't know the question
Then after that
Box all ya keywords
Underline the question
Box all ya keywords

Verse 1
Imma use C.U.B.E.S. to solve word problems
"C" stands for circle all the numbers in the problem
"U" means underline the question right there
"B" means put a box around your key words
"E" is for eliminate info that's unnecessary
"S" is for solve and check
Check the problem more than once if you need to
Use the CUBE method it will lead you to the right answer
Got it now? Let's go
Use a variable for quantities unknown
Use the acronym C.U.B.E.S.
"C" circle all the numbers
"U" cuderline the question
Now "B" box all your key words
Then "E" eliminate unnecessary info
"S" that's for solve and check
I use C.U.B.E.S.
C-U-B-E-S

Chorus (x2)

Verse 2
What up? What it do? This is Mr. Q
I have an acronym
First letter is a "U" (understand)
Next letter is a "P" (plan)
Then there's an "S" (solve)
Last letter is "C" (check… check)
Make word problems easy
"U"
Read the problem carefully, highlight, circle
Underline information, identify the question
"P"
Write down everything you need
Draw a picture if you need and choose a strategy
"S"
This is where you work it out (solve)
Make an equation for the situation
And use your plan to solve
And if you need, write units for your solution
"C"
Check your work, this is the part when you check your work
Did you answer the question?
Does your answer make sense?
Make sure you understand, Plan, Solve, and Check
Did you understand, Plan, Solve, and Check?

Chorus (x2)

MULTI-DIGIT MULTIPLICATION

Common Core Standard 4.NBT.B 5 – Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Let's do this the old way
2 numbers, each 2 digits
34 times 15 first line 'em up get wit' it
34 up top, 15 on the bottom
Start off in the ones place of the bottom number
You got it
That's the number 5, now multiply with all the top digits
Starting with the 4, that's 20
You can drop the digit zero in the ones place
Then carry 2
Multiply 5 and 3 that's 15
Now add your 2, that's 17 drop it down
170 the first row
Now drop to the second row
In the ones place, put a zero
Now go to the tens place
Take the number, multiply with the top digits, yo it's a 1
Multiply it with the top digits, 1 and 4
That's 4 now write it in the tens place
1 and 3 is 3, but write 3 in the hundreds place
The second row is 340
Now what? Add 'em up
So 510 is your answer
Now you can help a friend

Chorus
Yeah it's time to multiply
The answer is the product right
You can do this thing two ways

Multiply your grades and get 2 A's
Multiply each bottom number
By the digits on the top
If you understand place value
Grades are going to the top
Top of the class, you will pass
Listen up we got two ways
Learn them both and get good grades

My Verse
Okay, 34 x 15
Here we go, follow Mr. Queen
I got a new way Imma show you
Gonna do this with place value
15 on the bottom and 34 on top
First I'll explain each digit and it's place
(15) the 5 is ones
And the 1 is ten
(34) the 4 is ones
And the 3 is thirty
Multiply 5 x 4, write 20 below the line
5 x 30, 150, write that below 20
10 x 4 is 40, write that below 150
30 x 10 is 300, write that below 40
Now add them all up and you'll get 510
If you understand, go ahead and help a friend

Chorus

FACTORS AND MULTIPLES

Common Core Standard 4.OAB.4 – Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

Whole numbers are multiples of each of their factors
Multiply two whole numbers those are called factors.

Verse 1
When you want to find all the factor pairs of a number
Start with the easiest pair first: the numbers 1 and itself
That's the smallest and the biggest factors
Let's try the number 10
First factor pair is 1 and 10 because 1 times 10 is 10
Now check the number 2
See 2 times 5 is 10
So two and five are a factor pair of the number 10
Now check the number three
Can you count by 3 and get 10? No
So 3 is not a factor of 10
Now check the number four
Can you count by four and get 10? No
So four is not a factor of 10
Now check the number 5
See 5 times 2 is 10
Since we already have 2 and 5, we have all the factors of 10
So the factors of 10 are 1 and 2, 5 and 10. So it means 1 and 2, 5 and 10
all divide 10
So 10 is a multiple of 1, 2, 5, and 10
A whole number is a multiple of its factors, tell a friend.

Chorus

Whole numbers are multiples of each of their factors
Multiply two whole numbers, those are called factors
And the product is a multiple of each of those factors
Whole numbers are multiples of each of their factors.

Verse 2
How can you tell if a number's a multiple of a whole number?
(Factors and multiples) Listen, all you got to do is divide (got to divide)
When there are no remainders, it means that you have a multiple (factors and multiples)
Let's take the number 35
Let's see if 35 is a multiple of any number that's on this list
What are the numbers? 4, 5, and 6
4 divides 35 8 times with remainder 3
So 35 is not a multiple of 4 because there is a remainder
Let's see about 5. 5 divides 35
7 times with no remainders
So 35 is a multiple of 5
Let's try the number 6
6 divide 35 5 times. Are there remainders?
Yup, remainder 5
So 35 is not a multiple of 6 because there is a remainder
In order to be a multiple there can be no remainders
If one number divides a second number evenly
The second number is a multiple of the first number.

Chorus

SUCCESS

S-U-C-C-E-S-S
Yes I could do it, I could be successful
S-U-C-C-E-S-S
Yes you could do it, you could be successful

Verse 1
Stay on ya grind, give it all you got
You could find success if you try your best
Got to put in work
Never be afraid to go the extra mile
Hit the books hard, it will lead to success
Got to put in work
Everyday Imma go hard now
So I could find success
I can be successful
S-U-C-C-E-S-S
Spell it, S-U-C-C-E-S-S
Say "Yes I can do it, I can be successful"
"Yes I can do it, I can be successful"
Yes you can do it, you can be successful
"Yes you can do it, you can be successful"
Make goals and a plan to help you reach them
Pay attention to find success
Listen when the teacher's teaching
Giving you the knowledge, but to make it work
And get what you deserve
Want to find success?
Gotta put in work

Chorus
S-U-C-C-E-S-S…"S-U-C-C-E-S-S"
S-U-C-C-E-S-S…"S-U-C-C-E-S-S"
Say I will…"I will"
Say I will…"I will"
S-U-C-C-E-S-S…"S-U-C-C-E-S-S"

Verse 2
I will see success, yep I work hard
Yep I just flex on a test on a Monday
Or on a Friday
It really doesn't matter
Success is my way
To a better life, that's right
Follow these steps, you'll be all right
Work hard, never doubt, dream big, plan it out
I will be S-U-C-C-E-S-S-F-U-L
And if I fail, I'll learn from that
And I'll excel
Success is not a fantasy, it's my reality
S-U-C-C-E-S-S
I work hard so I don't stress
My work is organized, my behavior is the best
I will succeed and live out my dreams
Dedication, preparation, education, leads to…

Chorus