| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | Making A Whole |
| Focus: | Fractions |

## Materials:

White boards
Crayolas
Socks

Vocabulary Notebooks
dice
decks of cards (jokers and face cards removed)

| Opening |
| :--- |
| $\quad$ State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> Business made a profit of $\$ 240.80$. Sue keeps $1 / 2$ of the profits. She give each of the 5 people who work for her $20 \%$ of the other $1 / 2$ of the profits. How much does each person get? | *Activity $\rightarrow$ Teachable <br> Moment(s) throughout <br> During the lesson check in with students repeatedly. |
| Fact Practice <br> Spokes on a Wheel <br> 1. Divide students into pairs. <br> 2. On a white board, student draws a small circle with 9 spokes coming out of it. (should look like a bicycle tire) <br> 3. Have students choose to put a 6,7 or 8 in the center circle. <br> 4. Student rolls two dice and adds the pips (dots). <br> 5. Taking this total, student writes a math problem on one of the spokes (eg. 7 is in the circle and students rolls a 3 and 5 which totals 8 . The spoke equation would look like $7 \times 8=56$ <br> 6. Process continues until all spokes have an equation. | Check in about what is happening and what they are thinking. <br> Take advantage of any teachable moments. <br> Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |
| Math Vocabulary <br> Word for Today: percentage <br> Description: Percentage refers to a fraction when the assumption is made that the denominator is 100 . So if $100 \%$ is whole, $57 \%$ indicates that 57 out of the 100 has been found, or correct, or is being used. \% is the symbol for percent. Percent fives you an | It is important to review academic math vocabulary often throughout the day Complete the Vocabulary notebook for each word. |

opportunity to compare things that do not necessarily have a denominator of 100 to begin with, but when translated into percentage, this allows the comparison to be made.
Students complete the Vocabulary Notebook
Vocabulary Notebook Sample:

| New Word | My Description <br> percentage |
| :--- | :--- |
| A way to compare by telling how many out of <br> a hundred |  |
| I was happy that I had 82\% on my social |  |
| studies test. |  |$\quad$ Drawing

## Activity <br> Making A Whole

Explain to students that we are going to use cards to create fractions that can be added together to equal a whole number.
Demonstrate: Bring students up to the front as volunteers and show them how to play the game, Making A Whole as described below. Be sure that students can play the game effectively and then have them play with a partner.

Materials: Deck of cards with jokers and face cards removed White board

## Directions:

1. Shuffle the deck
2. Deal 6 cards to each player
3. Player one arranges the cards, if possible to create two fractions that will total a whole number. For example: $3 / 6+1 / 2=1$
4. Player that creates a problem that totals 1 receives one point. If he/she cannot make a fraction, he draws a card and discards one that he/she currently has.
5. Second player does the same.
6. Play continues until one player has a total of 10 points.

When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.


## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }}-5^{\text {th }}$ Grades |
| Lesson Title: | Making A Whole |
| Focus: | Fractions |

## Materials:

| White boards | Vocabulary Notebooks |  |
| :--- | :--- | :--- |
| Crayolas | Decks of cards | Socks |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> John has 100 basketballs. 70 or brownish orange. The rest are white. Write a \% that shows how many white basketballs John has. | *Activity $\rightarrow$ Teachable <br> Moment(s) throughout <br> During the lesson check in |
| Fact Practice <br> Multiplication Ladder <br> 1. Give each student a white board (include marker or crayola). <br> 2. Student should draw a ladder like the one below. <br> 3. Have student roll 2 dice, total the pips and then multiply that number times each of the numbers in the ladder, writing the total to the right of the number. | Check in about what is happening and what they are thinking. <br> Take advantage of any teachable moments. <br> Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking. <br> When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |
| Math Vocabulary <br> Word for today: Review the word percentage <br> Description: Review the information that you gave the students yesterday about the term | It is important to review academic math vocabulary often throughout the day. |

percentage. Remind students of the symbol that represents the word percentage (\%). Make several drawing on the board to show different percentages and how to correctly write the number and the symbol ex. $74 \%, 89 \%, 94 \%$ etc.

Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes.
Vocabulary Notebook Sample:

| New Word <br> percentage | My Description <br> A part of the whole related to 100 parts in <br> the whole |
| :--- | :--- |
| Personal Connection <br> I got 100\% on my spelling test. | Drawing |

## Activity <br> Making A Whole

Review with the students how to play the game that they learned how to play yesterday. Be sure that students can play successfully before having them play on their own.
Materials: Deck of cards with jokers and face cards removed White board
Directions:

1. Shuffle the deck
2. Deal 6 cards to each player
3. Player one arranges the cards, if possible to create two fractions that will total a whole number. For example: $3 / 6+1 / 2=1$
4. Player that creates a problem that totals 1 receives one point. If he/she cannot make a fraction, he draws a card and discards one that he/she currently has.
5. Second player does the same.
6. Play continues until one player has a total of 10 points.

Complete the Vocabulary notebook for each word.
When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.


## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them>

| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }}$ \& $5^{\text {th }}$ Grades |
| Lesson Title: | Fraction War |
| Focus: | Fractions |

## Materials:

| White boards | Vocabulary Notebooks |
| :--- | :--- |
| Crayolas | decks of cards |
| Socks | Fraction Cards (attached) |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> Write a fraction that shows the number of vowels in the word: thermometer | *Activity $\rightarrow$ Teachable <br> Moment(s) throughout <br> During the lesson check in with students repeatedly. <br> Check in about what is happening and what they are |
| Fact Practice <br> Draw! <br> 1. Divide students into pairs and give each pair a deck of cards. <br> 2. Remove the face cards and jokers from the deck of cards. <br> 3. Shuffle the deck. <br> 4. Decide who will go first. <br> 5. First player draws two cards. <br> 6. Student multiplies the cards. <br> 7. Student writes his/her problem on the white board, writing a complete number sentence. <br> 8. Students take turns drawing and creating problems. | thinking. <br> Take advantage of any teachable moments. <br> Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |
| Math Vocabulary <br> Word for Today: fraction <br> Description: A fraction is a number that is less than one and has two parts a numerator and a denominator. The denominator tells you have many parts you have to have in order to have the whole thing. If the denominator is 6 , then the whole has been divided into 6 parts, if the | It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. |

denominator is 9 , then the whole has been divided into 9 parts. The numerator tells you how many of parts of the whole you have. So if the denominator is 6 , it tells me that a whole has six parts, a numerator of 5 tells me that I have 5 of those six parts. It is a fraction that allows us to divide one thing into equal parts.
Have students complete his/her Vocabulary Notebook.
Vocabulary Notebook Sample:

| New Word $\quad$ Fraction | My Description <br> A number that represent less than a whole |
| :--- | :--- |
| Personal Connection <br> was able to get only a fraction of the work <br> done. |  |

## Activity <br> Fraction War

Demonstrate: Show the class how to play the game by bringing up volunteers to demonstrate how to play the game following the directions below.
Materials: Fraction addition and subtraction cards.
Directions:

1. Shuffle the cards and divide them equally between the 2 players
2. Players turn the top card over simultaneously
3. Player adds or subtracts the problem on the top card and calls out the answer.
4. Player with the highest value collects all of the cards
5. In the case of a tie, a next card is played.

When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

## Closing

## Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?


## Debrief

## Three Whats

Ask the following three what questions:
What was your key learning for the day?
What opportunities might you have to do this same thing in the "real world"?
What advice would you give to a "new" student getting ready to do this activity.

## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

Fraction Cards

| $\frac{1}{2}+\frac{1}{2}$ | $\frac{1}{4}+\frac{1}{4}$ | $\frac{1}{4}+\frac{2}{4}$ | $\frac{2}{4}+\frac{1}{4}$ |
| :---: | :---: | :---: | :---: |
| $\frac{1}{4}+\frac{3}{4}$ | $\frac{1}{8}+\frac{1}{8}$ | $\frac{1}{8}+\frac{2}{8}$ | $\frac{1}{8}+\frac{3}{8}$ |
| $\frac{1}{8}+\frac{5}{8}$ | $\frac{2}{8}+\frac{1}{8}$ | $\frac{2}{8}+\frac{2}{8}$ | $\frac{2}{8}+\frac{3}{8}$ |
| $\frac{2}{8}+\frac{4}{8}$ | $\frac{2}{8}+\frac{6}{8}$ | $\frac{3}{8}+\frac{1}{8}$ | $\frac{3}{8}+\frac{2}{8}$ |
| $\frac{3}{8}+\frac{3}{8}+\frac{4}{8}$ | $\frac{3}{8}+\frac{5}{8}$ | $\frac{4}{8}+\frac{1}{8}$ |  |
| $\frac{4}{8}+\frac{4}{8}$ | $\frac{5}{8}+\frac{2}{8}$ | $\frac{6}{8}+\frac{1}{8}$ | $\frac{7}{8}+\frac{1}{8}$ |
| $\frac{2}{2}-\frac{1}{2}$ | $\frac{3}{4}-\frac{1}{4}$ | $\frac{3}{4}-\frac{2}{4}$ | $\frac{4}{4}-\frac{1}{4}$ |
| $\frac{8}{8}-\frac{1}{8}$ | $\frac{8}{8}-\frac{2}{8}$ | $\frac{8}{8}-\frac{3}{8}$ | $\frac{8}{8}-\frac{5}{8}$ |
| $\frac{7}{8}-\frac{1}{8}$ | $\frac{7}{8}-\frac{3}{8}$ | $\frac{7}{8}-\frac{4}{8}$ | $\frac{7}{8}-\frac{6}{8}$ |


| $\frac{6}{8}-\frac{1}{8}$ | $\frac{6}{8}-\frac{2}{8}$ | $\frac{6}{8}-\frac{5}{8}$ | $\frac{6}{8}-\frac{5}{8}$ |
| :---: | :---: | :---: | :---: |
| $\frac{5}{8}-\frac{1}{8}$ | $\frac{5}{8}-\frac{3}{8}$ | $\frac{5}{8}-\frac{4}{8}$ | $\frac{4}{8}-\frac{1}{8}$ |
| $\frac{4}{8}-\frac{2}{8}$ | $\frac{3}{8}-\frac{1}{8}$ | $\frac{3}{8}-\frac{2}{8}$ | $\frac{2}{8}-\frac{1}{8}$ |


| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | Fraction War Cards |
| Focus: | Fractions |


| Materials: |  |
| :--- | :--- |
| White boards | Vocabulary Notebooks |
| Crayolas | Fraction War Cards from yesterday |
| Socks | Double 9 Dominoes |

## Opening

## State the objective

Today we are going to practice using our math vocabulary and skills.

## Gain prior knowledge by asking students the following questions

What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?
How can you tell that you are on the right track for solving the problem?
What are the basic operations that you need to utilize during math?

| Content (the "Meat") |
| :--- | :--- |
| Problem of the Day |
| The kids are going on a field trip. From Mrs. Johnson's room 3.4 bring lunch from home. In Mr. |
| Martin's class, $5 / 8$ bring lunches from home. If each class has 32 students, how many kids <br> brought lunch from home? |

## Fact Practice

Spots and Dots
There is a master of Double 9 Dominos attached to this lesson plan. You will need 1 full set for each pair of students in your class. It is recommended that you duplicate on card stock and if possible, laminate for use again in the future.

Players sit across from each other.
Dominoes are between them, face (or spots) down.
Each student draws a domino and writes the multiplication problem on their white board, multiplying the numbers represented by the spots Example: Domino drawn is


Multiplication: $2 \times 3=6$

## *Activity $\rightarrow$ Teachable Moment(s) throughout

During the lesson check in with students repeatedly.
Check in about what is happening and what they are thinking.
Take advantage of any teachable moments.
Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.
When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have
pieces you have.
Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes.
Vocabulary Notebook Sample:

| New Word $\quad$ My Description |
| :--- | :--- |
| A number that is less than one whole, has two |
| numbers, a numerator on top and a |
| denominator on the bottom. |$|$

Activity

## Fraction War

Review: Review the game from yesterday. Ask students how to play the game and what sort of things could "trip" a person up.
Play the game.
Materials: Fraction addition and subtraction cards

## Directions:

1. Shuffle the cards and divide them equally between the 2 players.
2. Players turn the top card over simultaneously.
3. Player adds or subtracts the problem on the top card and calls out the answer.
4. Player with the highest value collects all of the cards.
5. In the case of a tie, a next card is played.
students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.


## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular
way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them>

Double 9 Dominoes








| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | Decimal Bingo |
| Focus: | Decimals |

## Materials:

| White boards | Decks of cards | deck of cards for each pair |
| :--- | :--- | :--- |
| Crayolas | Vocabulary Notebooks |  |
| Socks | Bingo Cards |  |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> John and Jorge are going to an amusement park. They plan to eat lunch at the park as well as enjoy the rides. It will cost $\$ 13.00$ for admission, $\$ 2.50$ for a hot dog, and a soda will cost $\$ 1.75$. John says the will only need to take $\$ 16.00$. Jorge says they need to each take $\$ 20.00$. Who do you agree with and how did you decide? | *Activity $\rightarrow$ Teachable <br> Moment(s) throughout <br> During the lesson check in with students repeatedly. <br> Check in about what is |
| Fact Practice <br> Multiplication War <br> - Divide students into pairs. Give each pair a deck of cards without face cards and jokers. <br> - Shuffle the deck and divide the cards evenly between the two players. <br> - On go, the players turn over the cards at the same time. <br> - Students multiply the 2 numbers that have been turned up. <br> - First person to give the answer either wins the cards because the answer is correct, or has to turn over 2 cards because he/she gave the wrong answer. <br> - At the end of round, students may reshuffle the pile of cards that they have. <br> - Play can continue until one player has all cards or time has called. | happening and what they are thinking. <br> Take advantage of any teachable moments. <br> Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking. <br> When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |
| Math Vocabulary <br> Word for Today: decimal <br> Description: A decimal is a period that separates whole numbers from numbers that represent a part of a whole. The most common place that we find a decimal is in the writing | It is important to review academic math vocabulary often throughout the day Complete the Vocabulary notebook for each word. |

of dollars and cents. To write money, start with a \$ sign and tell how many dollars are there, for example, $\$ 3$. Second step is to put the decimal or the dot after the 3 to show that we are not looking at "cents", the kind that can take 100 pennies to equal a dollar. Remind students that pennies, nickels, dimes, quarter, and half dollars, represent a portion of the dollar. If I have 3 dollars, 1 quarter and 1 dime, I would have $\$ 3.35$. Give children several chances to make this new information work.

Vocabulary Notebook Sample:

| New Word <br> decimal | My Description <br> A mathematical "period" that separates whole number from a part of the whole |
| :---: | :---: |
| Personal Connection <br> I use a decimal point to write 4.25 which says I have 4 whole things and 25 of a fifth one. | Drawing |

## Activity Decimal Bingo

Demonstrate how to set up the Bingo Card by using the answers randomly on the bingo board. New bingo cards can be made each time the game is played. Draw a large Bingo card on the board and demonstrate exactly how to set up the card.

## Decimal Bingo

Materials: Bingo Cards, Bingo answer sheet, tokens or paper to mark spaces

## Directions:

1. Student makes Bingo Card by placing the answers randomly on his/her card
2. Leader draws a problem card, writes the problem on the board.
3. Students find the answer to the problem and then if that answer is one that they selected, then that number is covered.
4. Winner calls Bingo when they have.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center


## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

Bingo Cards

| B | I | N | G | O |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  | Free |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Problem and Answer Cards

| $\begin{array}{r} 0.5 \\ +0.5 \\ \hline \end{array}$ | $\begin{array}{r} 0.1 \\ +0.6 \\ \hline \end{array}$ | $\begin{array}{r} 0.3 \\ +0.5 \\ \hline \end{array}$ | $\begin{array}{r} 0.6 \\ +0.9 \\ \hline \end{array}$ | $\begin{array}{r} 0.4 \\ +0.2 \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{r} 45.3 \\ +10.2 \\ \hline \end{array}$ | $\begin{array}{r} 82.3 \\ +101.4 \\ \hline \end{array}$ | $\begin{array}{r} 17.3 \\ +22.8 \\ \hline \end{array}$ | $\begin{array}{r} 54.3 \\ +45.2 \\ \hline \end{array}$ | $\begin{array}{r} 14.6 \\ +25.6 \\ \hline \end{array}$ |
| $\begin{array}{r} 2.6 \\ +24.3 \\ \hline \end{array}$ | $\begin{array}{r} 118.1 \\ +67.6 \\ \hline \end{array}$ | $\begin{array}{r} 12.3 \\ +54.1 \\ \hline \end{array}$ | $\begin{array}{r} 7.5 \\ +29.4 \\ \hline \end{array}$ | $\begin{array}{r} 33.2 \\ +32.2 \\ \hline \end{array}$ |
| $\begin{array}{r} 1.5 \\ -0.8 \\ \hline \end{array}$ | $\begin{array}{r} 63.4 \\ -57.8 \\ \hline \end{array}$ | $\begin{array}{r} 7.5 \\ -3.6 \\ \hline \end{array}$ | $\begin{array}{r} 108.2 \\ -94.7 \end{array}$ | $\begin{array}{r} 1.2 \\ -0.6 \\ \hline \end{array}$ |
| $\begin{array}{r} 25.1 \\ -16.4 \end{array}$ | $\begin{array}{r} 99.1 \\ -24.9 \\ \hline \end{array}$ | $\begin{array}{r} 2.1 \\ -0.9 \\ \hline \end{array}$ | $\begin{array}{r} 480.3 \\ -358.9 \\ \hline \end{array}$ | $\begin{array}{r} 79.4 \\ -5.9 \end{array}$ |
| $\begin{array}{r} 1.2 \\ -0.5 \\ \hline \end{array}$ | $\begin{array}{r} 826.1 \\ -745.9 \\ \hline \end{array}$ | $\begin{array}{r} 512.4 \\ -460.8 \\ \hline \end{array}$ | $\begin{array}{r} 3.5 \\ -1.6 \\ \hline \end{array}$ | $\begin{array}{r} 50.3 \\ -19.4 \\ \hline \end{array}$ |

Answer Cards

| 1.0 | 0.7 | 0.8 | 1.5 | 0.6 |
| :---: | :---: | :---: | :---: | :---: |
| 55.5 | 183.7 | 40.1 | 99.5 | 40.2 |
| 26.9 | 185.7 | 66.4 | 36.9 | 65.4 |
| 0.7 | 5.6 | 3.9 | 13.5 | 0.6 |
| 8.7 | 74.2 | 1.2 | 121.4 | 73.5 |
| 0.7 | 80.2 | 51.6 | 1.9 | 30.9 |
|  |  |  |  |  |


| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | Decimal Bingo 2 |
| Focus: | Decimals |

## Materials:

| White boards | Decks of cards | Socks |
| :--- | :--- | :--- |
| Crayolas | Vocabulary Notebooks | Decimal Bingo materials from yesterday |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |

## Content (the "Meat")

## Problem of the Day

Cupcakes, decorated cookies, donuts, and chocolate chip cookies are sold at the corner bakery. The prices are $\$ 2.50, \$ 1.75, \$ 1.90$, and $\$ 1.15$. How much does each item cost.

Chocolate chip cookies cost more than donuts
Decorated cookies cost the most
Neither the donuts or the cupcakes cost $\$ 1.75$

## Fact Practice

## Fore-header

1. Divide students into trios. Give each trio a deck of cards without face cards and jokers.
2. Shuffle the deck and give all of the cards to the referee who will be "judging" the contest
3. On go, players are each handed a card by the referee and WITHOUT looking, put the card face out on his/her forehead.
4. The referee multiplies the two numbers together and states the answer.
5. Each player looks at the other person's exposed number and names his/her own number.
6. Person who wins (accuracy and time), collects both cards.
7. Play continues until all cards are gone.
8. Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee.

Word for today: decimal
Description: Review the information that you shared with students yesterday. Explain to students that numbers written to the right of a decimal point are labeled tenths, hundredths, thousandths, ten-thousandths, and hundred-thousandths. Explain that the letters "th" share the information that it is a decimal. Also share that when reading these number, the decimal point is read by saying the word "and".
Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes.
Vocabulary Notebook Sample:

| New Word | My Description <br> Decimal |
| :--- | :--- |
| A point that looks like a period that separates <br> a whole number from a part of a whole |  |
| Personal Connection <br> I use a decimal point when I write <br> information about money: $\$ 14.67$. | Drawing |

## Activity <br> Decimal Bingo

Review yesterday's game as you will play it again today. You will use the same material as yesterday.

Decimal Bingo
Materials: Bingo Cards, Bingo answer sheet, tokens or paper to mark spaces

## Directions:

1. Student makes Bingo Card by placing the answers randomly on his/her card.
2. Leader draws a problem card, writes the problem on the board.
3. Students find the answer to the problem and then if that answer is one that they selected, then that number is covered.
4. Winner calls Bingo when they have.
academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word.
When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.


| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | Dueling Decimals |
| Focus: | Decimals |

## Materials:

White boards
Crayolas
Socks

Vocabulary Notebooks
6 -sided dice; 12-sided dice decks of cards

| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> Julie believes that the answer to the problem below written in its simplest form if $6 / 9$. $5 / 9+1 / 9=$ <br> Is she correct? Why or why not? | *Activity $\rightarrow$ Teachable Moment(s) throughout <br> During the lesson check in with students repeatedly. <br> Check in about what is happening and what they are thinking. |
| Fact Practice <br> Fact Family <br> A Fact Family is 3 numbers which have a relationship in multiplication and division. For example, the number 9,4 , and 36 have a particular relationship in math. This family has four members: $9 \times 4=36$ <br> $4 \times 9=36$ $36 \div 4=9$ $36 \div 9=4$ <br> Students should roll 2 dice and create a Fact Family by writing the members of the family on the white board. Student should roll a total of 5 times, creating 5 Fact Families. | Take advantage of any teachable moments. <br> Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking. <br> When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |
| Math Vocabulary <br> Word for Today: simplest form <br> Description: Simplest form is a term we use when we talk about fractions. When a fraction is written in its simplest form there is no common number that can be divided into the numerator | It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary |

and/or the denominator with the exception of 1 . For example $1 / 2$ is in its simplest form, however $2 / 4$ is not, because both the numerator and the denominator can be divided by 2 . Have students begin with a whole piece of paper. Have them decide how many pieces they will divide the paper into (not more than 12). Then have them divide the paper into that many pieces. This number will become the denominator. Have them select various numbers of pieces for the numerator. Record the fraction, written in the simplest form.
Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes.
Vocabulary Notebook Sample:

| New Word | My Description <br> Refers to writing numbers in its most simple <br> form, making it easier for other to understand <br> what we are thinking |
| :--- | :--- |
| Personal Connection <br> When I am finished adding fractions I <br> want to put the answer into its simplest <br> form. | Drawing |

## Activity <br> Dueling Decimals

Demonstrate how to play this game by asking volunteers to come to the front and teaching them the rules of the game as written below.
Materials: Deck of cards without tens, jokers, and face cards removed. Separate the ace (1), 2,3 , and 4 of hearts from the deck and hold them separately. White board

## Directions:

The object of this game is to create the largest number.
Shuffle the remaining cards.
Player one draws a card from the 4 hearts (either an ace or $1,2,3$, or 4 . This number will indicate where to place the decimal. Example:

| $\bullet-1$ | $\bullet-2$ | $\bullet-3$ | $\bullet-4$ |
| :---: | :---: | :---: | :---: |

If player draws the 3 of hearts, then the decimal would be in this location on his/her white board.


Player then draws one of the other cards (for example a 3. Player must decide where to place the 3 in the number grid on his/her white board.
After the number is placed, player two repeats the process.


Player one draws another card and places it on the grid (the card that is already on the card
notebook for each word. When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.
can NOT be moved.
When all three numerals are placed, the largest number wins.

## Closing <br> Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?


## Debrief

## Three Whats

Ask the following three what questions:
What was your key learning for the day?
What opportunities might you have to do this same thing in the "real world"?
What advice would you give to a "new" student getting ready to do this activity?

## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak).
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | Dueling Decimals 2 |
| Focus: | Decimals |

## Materials:

White boards
Crayolas
Socks

Vocabulary Notebooks
Copies of activities at end of Lesson Plan
Decks of cards

| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |

## Content (the "Meat")

Problem of the Day

## *Activity $\rightarrow$ Teachable Moment(s) throughout

It's Valentine's Day. 3/10 of the students received paper valentines. $1 / 10$ received a candy treat. The others received both paper valentines and a candy treat. What fraction (in its simplest form) got both paper and candy valentines?

## Fact Practice

Multiples
Multiplication facts are learned by recognizing the multiples of any given number. In this practice you will be determining the multiples of randomly generated numbers. You will need a chart and crayolas (150 chart).

1. Roll one or two dice (if you roll two add the numbers together to determine the factor in the fact practice)
2. Mark all multiples of the number and then pass off to the next person.
3. Player may mark the same number.

During the lesson check in with students repeatedly.
Check in about what is happening and what they are thinking.
Take advantage of any teachable moments.
Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.
When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

It is important to review academic math vocabulary often throughout the day.

Description: Remind students of the conversation yesterday about fractions being written in the simplest form. Remind them that this means the numbers could not both be divided by the same number other than 1.
Review the entry from yesterday. Have students discuss in pairs and determine if they want to make any changes in the Vocabulary Notebook entry.

## Vocabulary Notebook Sample:

| New Word | My Description <br> Simplest form <br> Refers to fraction written in the lowest <br> comparison (435 of 870 is the same as $1 / 2)$ |
| :--- | :--- |
| Personal Connection <br> Please rewrite those fractions in the <br> simplest form. <br> Drawing |  |
| $\frac{\mathbf{2}}{\mathbf{4}} \frac{\mathbf{1}}{\mathbf{2}}$ |  |

## Activity <br> Dueling Decimals

Review with students how to play this game and then allow them to play with new partners, etc. form last week.

## Dueling Decimals

Materials: Deck of cards without tens, jokers, and face cards removed. Separate the ace (1), 2,3 and 4 of hearts from the deck and hold them separately. White board
Directions:
The object of this game is to create the largest number.
Shuffle the remaining cards.
Player one draws a card from the 4 hearts (either an ace or $1,2,3$, or 4 . This number will indicate where to place the decimal. Example:

| $\bullet-1$ | $\bullet-2$ | $\bullet-3$ | $\bullet-4$ |
| :--- | :--- | :--- | :--- |

If player draws the 3 of hearts, then the decimal would be in this location on his/her white board.


Player then draws one of the other cards (for example a 3. Player must decide where to place the 3 in the number grid on his/her white board.
After the number is placed, player two repeats the process.


Player one draws another card and places it on the grid (the card that is already on the card can NOT be moved.
When all three numerals are placed, the largest number wins.

Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.


## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

Fact Practice--Multiples

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 |
| 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 |
| 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |


| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th } \& 5^{\text {th }} \text { Grades }}$ |
| Lesson Title: | Tic Tac Toe |
| Focus: | Fractiona |

## Materials:

White boards
Crayolas
Socks

Vocabulary Notebooks two, 12-sided dice for each pair Product Hunt Work Sheet

Materials from yesterday

| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |

## Content (the "Meat")

## Problem of the Day

You've been saving quarters for a long time and you have them in your piggy bank. If piggy banks were all the same size and held the same number of quarters, would you rather have 3 $1 / 10$ banks or $37 / 10$ banks? Why?

## Fact Practice

## Product Hunt

1. Divide students into pairs.
2. Each pair needs a Product Hunt sheet (attached to this lesson plans).
3. Player rolls two, 12 -sided dice.
4. Player multiplies the two numbers.
5. If the product is not yet covered, then player may cover the product.
6. Next player repeats steps 1-3.
7. Winner is determined by who has the most numbers covered.

## Math Vocabulary

## Word for Today: equivalent

Description: Review the word equivalent from yesterday. Talk with students about what equivalent means. Ask students to divide themselves into two equivalent groups. Ask students if they should consider just numbers, or number of girls and boys, people who are

## *Activity $\rightarrow$ Teachable Moment(s) throughout

During the lesson check in with students repeatedly.
Check in about what is happening and what they are thinking.
Take advantage of any teachable moments.
Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.
When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.
It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word.
this age or that. Ask them to determine in what way the groups will be equivalent. Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes.
Vocabulary Notebook Sample:

| New Word <br> equivalent | My Description <br> Things that are equal are equivalent |
| :--- | :--- |
| Personal Connection <br> My 4 quarters are equivalent to your 10 <br> dimes. | Drawing |

Activity
Tic Tac Toe
Review the game from yesterday and talk about the equivalent fractions, decimals, and percentages. Have students pick new partners to play the game with. Use the game materials from yesterday.

## Directions:

1. The first column must contain a fraction card, the second column a decimal card, and the third column the percentage card.
2. When player one places his/her first card, the equivalence value of the row has been determined.
3. For example, if the first person plays .5 in the center of the Tic Tac Toe, then if the second player wants to block right or left, he/she must play the fraction or \% card that is equal to .5 .
4. Likewise, if the second player wants to play top left, then he/she must play a fraction card other than $1 / 2$, since that is being used in the center row.

When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

## Closing

## Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?


## Debrief

## Three Whats

Ask the following three what questions:
What was your key learning for the day?
What opportunities might you have to do this same thing in the "real world"?
What advice would you give to a "new" student getting ready to do this activity?

## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

Product Hunt

| 48 | 20 | 81 | 3 | 45 | 27 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 24 | 108 | 77 | 7 | 40 |
| 120 | 72 | 96 | 8 | 18 | 60 |
| 14 | 144 | 70 | 22 | 15 | 11 |
| 33 | 35 | 66 | 132 | 63 | 16 |
| 12 | 30 | 28 | 110 | 100 | 49 |
| 6 | 36 | 21 | 121 | 90 | 2 |
| 84 | 5 | 44 | 25 | 99 | 10 |
| 32 | 9 | 56 | 88 | 4 | 11 |
| 24 | 50 | 55 | 54 | 42 | 80 |


| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\text {th }} \& 5^{\text {th }}$ Grades |
| Lesson Title: | How Many Do You Have? |
| Focus: | Review |

## Materials:

Post Its
Dice
Prizes (these can be time, a leadership role, opportunities to be the "teacher"

| Opening |  |
| :--- | :--- |
| Today we are going to have fun playing a game. | State the objective |

## Content (the "Meat")

## Activity

## How Many Do You Have?

1. Divide students in groups of $3-4$
2. On the Post-lt, each group writes a number between 5 and 70
3. Post the numbers in numeric order on the white board or a chart.
4. Roll 5 dice one time and one time only
5. Teams are to use any math that they know ( $+,-, X, \div$, use of parenthesis, exponents) to make each of the numbers on the Post Its.
6. Give Teams 20-25 minutes to complete the task
7. Team that has the most correct equations, wins the prize

|  |  |
| :---: | :---: |
| Say: | Closing |
| • Please recap what we did today. | Review |
| $\bullet$ |  |

## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

| Component: | Math |
| :--- | :--- |
| Grade Level: | $4^{\mathrm{h}} \& 5^{\mathrm{h}}$ Grades |
| Lesson Title: | Tic Tac Toe Equivalents |
| Focus: | Fractions, Decimals, Percentage Equivalents |

## Materials:

| White boards | Vocabulary Notebooks | Tic Tac Toe Game Pieces |
| :--- | :--- | :--- |
| Crayolas | Cards |  |
| Socks | Tic Tac Toe Board (attached to this lesson plan) |  |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and skills. |
| Gain prior knowledge by asking students the following questions |
| What are some strategies that you use when you are trying to figure out how to solve a mathematics problem? |
| How can you tell that you are on the right track for solving the problem? |
| What are the basic operations that you need to utilize during math? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day Julie needs to have 3 equivalent fractions for $3 / 4$. What would these be? $3 / 4=$ $\qquad$ $\qquad$ $\qquad$ | *Activity $\rightarrow$ Teachable <br> Moment(s) throughout <br> During the lesson check in with students repeatedly. |
| Fact Practice <br> Target <br> 1. Divide students into trios. <br> 2. Each trio needs a deck of cards without face cards and jokers. <br> 3. Place the cards face up in a TicTac Toe Grid. <br> 4. Turn up a $10^{\text {th }}$ card which will be to the side and becomes the target number (aces count as 1) <br> 5. Each player makes an equation with some or all of the numbers in the grid to equal the target number. Students may add, subtract, multiply or divide. <br> 6. Each card may be used only one time in the equation. <br> 7. As the cards are being picked up, the player must say the equation aloud-for example if the target card is 10 , then I could say $5 \times 2=10$, and pick up the 5 and the 2. <br> 8. After one player finishes his/her turn, then the cards taken are replaced by cards from the remaining deck. <br> 9. Player with the most cards at the end of the game win. | Check in about what is happening and what they are thinking. <br> Take advantage of any teachable moments. <br> Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking. <br> When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |
| Word for Today: equivalent Math Vocabulary | It is important to review academic math vocabulary often throughout the day. |

Description: This term refers to things being equal. For example, if you half of an able it is equivalent to having $2 / 4$ of the apple, or $3 / 6$ of the apple, or $4 / 8$ of the apple. These are all ways of looking at how we might divide a $1 / 2$ of an apple so that we are talking about equivalents. Equivalent is two things of equal value. Ask students to consider money equivalents.
Students should complete the Vocabulary Notebook.
Vocabulary Notebook Sample:

| New WordEquivalent | My Description <br> Things that are equal in value or amount |
| :--- | :--- |
| Personal Connection <br> We have an equivalent number of cookies <br> for everyone. | Drawing |

Activity

## Tic Tac Toe

Purpose of the game is to learn the equivalents in terms of fractions, decimals, and percentages.
Explain to students that fractions, decimals and percentages can be equivalent. For example $1 / 2$ is also .5 and $50 \%$. $1 / 4$ is also .25 and $25 \%$. Talk with students and determine other equivalents (thirds, eights, tenths, sixths, etc.)
Demonstrate how to play the Tic Tac Toe game, bringing students up as volunteers to show students how to play.

## Directions:

1. The first column must contain a fraction card, the second column a decimal card, and the third column the percentage card.
2. When player one places his/her first card, the equivalence value of the row has been determined.
3. For example, if the first person plays .5 in the center of the Tic Tac Toe, then if the second player wants to block right or left, he/she must play the fraction or \% card that is equal to .5 .
4. Likewise, if the second player wants to play top left, then he/she must play a fraction card other than $1 / 2$, since that is being used in the center row.

Complete the Vocabulary notebook for each word.
When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)
Vocabulary Notebooks can be made from $1 / 2$ of a composition book.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.


## Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.

| Fraction | Decimal | Percent |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |


| $1 / 4$ | .25 | $25 \%$ |
| :---: | :---: | :---: |
| $1 / 2$ | .5 | $50 \%$ |
| $3 / 4$ | .75 | $75 \%$ |
| $1 / 8$ | .125 | $12.5 \%$ |
| $1 / 3$ | .33 | $33 \%$ |
| $2 / 3$ | .67 | $67 \%$ |
| $3 / 8$ | .375 | $37.5 \%$ |
| $5 / 8$ | .625 | $62.5 \%$ |
| $7 / 8$ | .875 | $87.5 \%$ |
| $1 / 10$ | .1 | $10 \%$ |



