#### **Fractions:** Comparing Decimals

| Aim:<br>Read, write, order and compare numbers with<br>up to three decimal places.<br>I can compare numbers with up to three<br>decimal places. | <pre>Success Criteria: I can read and write numbers with up to three decimal places. I can compare the value of digits in the same place value position. I can use &lt; and &gt; to compare numbers.</pre> | Resources:<br>Lesson Pack<br>Whiteboards and pens - class set  |
|---|--|--|
| <b>Key/New Words:</b><br>Decimal place, decimal point, tenths, hundredths,<br>thousandths, compare, place value.                                | I can compare numbers with different numbers of decimal places.  | Preparation:<br>Decimal Number Cards - one set per group,<br>cut up<br>Differentiated Decimal Number Chains<br>Activity Sheets - one per child |

- Prior Learning:
- It will be helpful if children understand decimal place value including thousandths.

| Learning Se | quence   |  |  |  |  |  |  |  |  |  |  |
|-------------|--|--|--|--|--|--|--|--|--|--|--|
|             | <b>Decimal Missing Numbers:</b> Identify the decimal number that needs to be added to the number shown on the Lesson <b>Presentation</b> to total one. Discuss how children could use their knowledge of number bonds to 10 and 100 to help with this.   |  |  |  |  |  |  |  |  |  |  |
|             | <b>Comparing Decimals:</b> Use the text and images displayed on the Lesson Presentation to remind the children that when comparing decimal numbers, we look at the place value of the digits in each number and start with the digits in the largest place value position. Remind the children that if the numbers have the same digit in a place value position, we look at the digits in the next place value column to find a difference. Rehearse using the greater than and less than symbols to compare decimal numbers. |  |  |  |  |  |  |  |  |  |  |
|             | Which Number Fits? Provide each group with the Decimal Number Cards. The children deal out the cards. For each of the five statements shown on the Lesson Presentation, the children identify if they have a card that can complete the statement.   |  |  |  |  |  |  |  |  |  |  |
|             | <b>Decimal Number Comparing:</b> In pairs, children decide which symbols would go between the three numbers shown on each of the two slides on the Lesson Presentation in order to correctly complete the comparison statements.   |  |  |  |  |  |  |  |  |  |  |
|             | <b>Decimal Number Chains:</b> Children complete the differentiated <b>Decimal Number Chains Activity Sheets</b> to show they can compare numbers with up to three decimal places.  |  |  |  |  |  |  |  |  |  |  |
|             | Children compare<br>numbers with the same<br>number of decimal places.<br>Children start by<br>comparing numbers<br>with the same number<br>of decimal places<br>and then move on to<br>comparing numbers<br>with different numbers<br>of decimal places.<br>Children compare<br>numbers with<br>different numbers<br>of decimal places.   |  |  |  |  |  |  |  |  |  |  |
|             | <b>Decimal Number Puzzle:</b> On their whiteboards, children find a way to complete the decimal number statement shown on the <b>Lesson Presentation</b> . If they correctly create a statement that is different from that of anyone else in their group, they score a point. The highest score at the end wins.  |  |  |  |  |  |  |  |  |  |  |
|             |  |  |  |  |  |  |  |  |  |  |  |

| wastern |  |
|---------|--|
| Jumpit: | Children jump as far as they can and measure the distance jumped. They then repeat this so that they have measurements for two   |
|         | jumps. They write a comparison statement about the two jumps. This could be repeated for throwing a beanbag, timing a run or any |
|         | other activity which can be measured to more than one decimal place.   |
| Makeit: | Give children four digits. They use these digits to make as many numbers under 10 as they can and then compare the numbers they  |
|         | have created.  |



Fractions

Maths | Year 5 | Fractions | Decimal Place Value | Lesson 2 of 3: Comparing Decimals





#### Aim

• I can compare numbers with up to three decimal places.

#### **Success Criteria**

- I can read and write numbers with up to three decimal places.
- I can compare the value of digits in the same place value position.
- I can use < and > to compare numbers.
- I can compare numbers with different numbers of decimal places.

#### Decimal Missing Numbers



What is the missing number in this decimal number addition calculation?

0.6 + 0.4 = 10.3 + 0.7 = 1

0.1 + 0?9 = 1

0.8 + 0?2 = 1

#### Decimal Missing Numbers

What is the missing number in this decimal number addition calculation?

0.25 + 0?75 = 1

0.84 + 0?16 = 1 0.42 + 0.58 = 1 0.91 + 0.09 = 1 How can we use our number bonds to 100 to help find the missing number?

For example, to compare 45.23 and 45.25, we look at the largest digit, the tens, first:

When comparing numbers, we can use symbols to show which is the smaller or larger number.

#### 45.23 < 45.25

the right until we find a difference.





Choose the correct symbol to compare these decimals.

### 0.456 > 0.426



Choose the correct symbol to compare these decimals.

## 0.213 > 0.211



Choose the correct symbol to compare these decimals.

## 1.705 < 1.725



Choose the correct symbol to compare these decimals.

#### 3.184 > 2.184



Choose the correct symbol to compare these decimals.

### 16.392 < 16.401



Т

0

is less

than

5



5.234 < 52.34

h

3

4

th

4

0

is less is greater than than

0

5

2

t

2

3

For example, to compare 5.234 and 52.34, we could imagine that there are zeros holding the extra spaces in the place value grid.

#### Whose Number Fits?

**Round 5** 

- Deal out
- In each ri statement shown on the slide and decide if you have a card that can complete the statement.
- Score one point for any card that can complete the statement.

#### **Decimal Number Comparing**

Which symbols are needed to complete these maths statements?



25.506

25.056

25.5

1

0

#### **Decimal Number Chains**



#### Decimal Number Puzzle

Find a way to complete this decimal number statement.

If you find an answer that is different from anyone else's, you score one point.

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13.054 < 13.0\_\_

#### Aim

• I can compare numbers with up to three decimal places.

#### Success Criteria

- I can read and write numbers with up to three decimal places.
- I can compare the value of digits in the same place value position.
- I can use < and > to compare numbers.
- I can compare numbers with different numbers of decimal places.



| Aim: I can compare numbers with up to three decimal pl              | <b>im:</b> I can compare numbers with up to three decimal places. |        |         |       |          |    |          |    |    |
|---|---|--------|---------|-------|----------|----|----------|----|----|
|   |   |        |         | Deliv | ered By: |    | Support: |    |    |
| Success Criteria  | Me  | Friend | Teacher | т     | РРА      | S  | I        | AL | GP |
| I can read and write numbers with up to three decimal places.       |   |        |         | Notes | s/Eviden | ce |          |    |    |
| I can compare the value of digits in the same place value position. |   |        |         |       |          |    |          |    |    |
| I can use < and > to compare numbers.                               |   |        |         |       |          |    |          |    |    |
| I can compare numbers with different numbers of decimal places.     |   |        |         |       |          |    |          |    |    |
| Next Steps  | ·   |        |         |       |          |    |          |    |    |
| J   |   |        |         |       |          |    |          |    |    |
| J   |   |        |         |       |          |    |          |    |    |
|   |   |        |         |       |          |    |          |    |    |

| т   | Teacher                              | I  | Independent     |
|-----|--------------------------------------|----|-----------------|
| PPA | Planning, Preparation and Assessment | AL | Adult Led       |
| S   | Supply                               | GP | Guided Practice |

| Aim: I can compare numbers with up to three decimal p               | Date: |       |         |        |          |    |       |          |  |  |
|---|-------|-------|---------|--------|----------|----|-------|----------|--|--|
|   |       |       |         | Delive | ered By: |    | Suppo | Support: |  |  |
| Success Criteria  | т     | РРА   | S       | I      | AL       | GP |       |          |  |  |
| I can read and write numbers with up to three decimal places.       |       | Notes | /Eviden | ce     |          |    |       |          |  |  |
| I can compare the value of digits in the same place value position. |       |       |         |        |          |    |       |          |  |  |
| I can use < and > to compare numbers.                               |       |       |         |        |          |    |       |          |  |  |
| I can compare numbers with different numbers of decimal places.     |       |       |         |        |          |    |       |          |  |  |
| Next Steps  | L     | I     | I       |        |          |    |       |          |  |  |
| J   |       |       |         |        |          |    |       |          |  |  |
| J   |       |       |         |        |          |    |       |          |  |  |
|   |       |       |         |        |          |    |       |          |  |  |

| т   | Teacher                              | I  | Independent     |
|-----|--------------------------------------|----|-----------------|
| PPA | Planning, Preparation and Assessment | AL | Adult Led       |
| S   | Supply                               | GP | Guided Practice |



## 0.43

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0.83

0.84

3

# 3.04

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4.3

4.38

4.8

4.83

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8

# 8.04

## 8.3

# 8.34

## 8.4

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#### **Decimal Number Chains**

 $\bigstar$ 

|                                    |   |        |  | I cc              | ın compar | e numbers              | s with up t | to three de | ecimal pla | ces.   |        |               | $\mathbf{c}$ |
|------------------------------------|---|--------|--|-------------------|-----------|------------------------|-------------|-------------|------------|--------|--------|---------------|--------------|
| Complete<br>the corre<br>pair of n | Complete the chains by putting<br>the correct symbol between each<br>pair of numbers. |        |  | <<br>is le<br>tha | ss i<br>n | ><br>is greate<br>than | r           | (*)<br>     |            | 0      |        | $\mathcal{L}$ |              |
| 4.3                                |   | 4.6    |  | 4.1               |           | 3.1                    |             | 3.3         |            | 3.7    | 3.2    |               | 3.9          |
| 9.45                               |   | 9.41   |  | 9.39              |           | 9.99                   |             | 9.09        |            | 9.56   | 9.49   |               | 9.94         |
| 1.328                              |   | 1.338  |  | 1.339             |           | 1.303                  |             | 1.301       |            | 1.295  | 1.299  |               | 1.209        |
| 28.61                              |   | 28.16  |  | 28.26             |           | 28.29                  |             | 28.19       |            | 38.29  | 38.38  |               | 38.36        |
| 33.333                             |   | 33.303 |  | 33.313            |           | 33.003                 |             | 30.641      |            | 30.651 | 30.065 |               | 30.066       |

#### Decimal Number Chains Answers

|   |   |        |   | I co                           | ın compai | re numbers | s with up | to three de | ecimal pla | ces.   |   |        |               | $\mathbf{x}$ |
|---|---|--------|---|--------------------------------|-----------|------------|-----------|-------------|------------|--------|---|--------|---------------|--------------|
| Complete the chains by putting<br>the correct symbol between each<br>pair of numbers. |   |        |   | <<br>is less<br>than         > |           |            |           | ر کی        |            |        |   |        | $\mathcal{I}$ |              |
| 4.3   | < | 4.6    | > | 4.1                            | >         | 3.1        | <         | 3.3         | <          | 3.7    | > | 3.2    | <             | 3.9          |
| 9.45  | > | 9.41   | > | 9.39                           | <         | 9.99       | >         | 9.09        | <          | 9.56   | > | 9.49   | <             | 9.94         |
| 1.328   | < | 1.338  | < | 1.339                          | >         | 1.303      | >         | 1.301       | >          | 1.295  | ٢ | 1.299  | >             | 1.209        |
| 28.61   | > | 28.16  | < | 28.26                          | ٢         | 28.29      | >         | 28.19       | ٢          | 38.29  | ٢ | 38.38  | >             | 38.36        |
| 33.333  | > | 33.303 | < | 33.313                         | >         | 33.003     | <         | 30.641      | <          | 30.651 | > | 30.065 | <             | 30.066       |



Maths | Year 5 | Fractions | Decimal Place Value | Lesson 2 of 3: Comparing Decimals



#### **Decimal Number Chains**

I can compare numbers with up to three decimal places.

Complete the chains by putting the correct 'greater than' or 'less than' symbol between each pair of numbers.

| 15.64  | 15.46  | 15.49  | 16.05  | 16.51  | 16.32  | 16.34  | 16.29  |
|--------|--------|--------|--------|--------|--------|--------|--------|
| 72.123 | 72.231 | 72.229 | 72.204 | 72.213 | 72.109 | 71.999 | 72.909 |
| 59.51  | 59.5   | 59.403 | 59.42  | 59.423 | 59.09  | 59.009 | 72.909 |
| 67.059 | 67.053 | 67.1   | 67.103 | 67.134 | 67.13  | 67.03  | 67.3   |

Complete the chains by selecting numbers which will fit between the symbols.

| 20.76 | > | > | < | 20.832 | < | > | > | < | 20.5 |
|-------|---|---|---|--------|---|---|---|---|------|
| 88.08 | < | > | < | 88.8   | > | < | > | > | 88.7 |

I can compare numbers with up to three decimal places.

Complete the chains by putting the correct 'greater than' or 'less than' symbol between each pair of numbers. 15.64 > < 15.49 < < > 16.32 < > 16.29 15.46 16.05 16.51 16.34 72.123 < 72.231 72.213 > 72.109 > 72.229 > 72.204 < > 71.999 < 72.909 59.51 > 59.5 > 59.403 < 59.42 < 59.423 > 59.09 59.009 < 72.909 > 67.059 < > 67.053 67.1 < 67.103 67.134 > 67.13 67.03 < 67.3 < >

Complete the chains by selecting numbers which will fit between the symbols.

Multiple answers possible.

| 20.76 | > | > | < | 20.832 | < | > | > | < | 20.5 |
|-------|---|---|---|--------|---|---|---|---|------|
| 88.08 | < | > | < | 88.8   | > | < | > | > | 88.7 |



#### **Decimal Number Chains**

I can compare numbers with up to three decimal places.

Complete the chains by putting the correct 'greater than' or 'less than' symbol between each pair of numbers.

| 11.735 | 11.73  | 11.8   | 11.064 | 11.069 | 11.69  | 11.6   | 11.534 |
|--------|--------|--------|--------|--------|--------|--------|--------|
| 83.8   | 83.764 | 83.77  | 83.707 | 83.79  | 83.081 | 83.196 | 83.2   |
| 20.01  | 20.99  | 20.906 | 20.084 | 20.8   | 20.902 | 19.999 | 19.905 |
| 99.09  | 99.9   | 99.909 | 99.009 | 99.99  | 99.999 | 99.099 | 99.09  |

Complete the chains by selecting numbers which will fit between the symbols.

| 77.76 | > | > |       | < | 77.7 | < |        | > | 77.75 | > | < |      |
|-------|---|---|-------|---|------|---|--------|---|-------|---|---|------|
| 50.1  | < | > | 50.16 | < |      | > | 50.163 | < |       | > | > | 50.1 |



I can compare numbers with up to three decimal places.

|        | Complete the chains by putting the correct 'greater than' or 'less than' symbol<br>between each pair of numbers. |        |       |            |           |                               |                          |                                 |          |             |        |        | Ŭ |        |
|--------|--|--------|-------|------------|-----------|-------------------------------|--------------------------|---------------------------------|----------|-------------|--------|--------|---|--------|
| 11.735 | >  | 11.73  | <     | 11.8       | >         | 11.064                        | ٢                        | 11.069                          | ٢        | 11.69       | >      | 11.6   | > | 11.534 |
| 83.8   | >  | 83.764 | <     | 83.77      | >         | 83.707                        | ٢                        | 83.79                           | >        | 83.081      | ٢      | 83.196 | ٢ | 83.2   |
| 20.01  | ٢  | 20.99  | >     | 20.906     | >         | 20.084                        | <                        | 20.8                            | <        | 20.902      | >      | 19.999 | > | 19.905 |
| 99.09  | <  | 99.9   | <     | 99.909     | >         | 99.009                        | ۲                        | 99.99                           | ۲        | 99.999      | >      | 99.099 | > | 99.09  |
|        |  |        | Compl | ete the ch | ains by s | electing n<br><i>Multiple</i> | umbers<br><i>answers</i> | which will<br><b>possible</b> . | fit betv | veen the sy | mbols. |        |   |        |

| 77.76 | > | > |       | < | 77.7 | < |        | > | 77.75 | > | < |      |
|-------|---|---|-------|---|------|---|--------|---|-------|---|---|------|
| 50.1  | < | > | 50.16 | < |      | > | 50.163 | < |       | > | > | 50.1 |

#### Fractions | Comparing Decimals

| I can compare numbers with up to three decimal places.              |  |
|---|--|
| I can read and write numbers with up to three decimal places.       |  |
| I can compare the value of digits in the same place value position. |  |
| I can use < and > to compare numbers.                               |  |
| I can compare numbers with different numbers of decimal places.     |  |

Fractions | Comparing Decimals

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#### Fractions | Comparing Decimals

| I can compare numbers with up to three decimal places.              |  |
|---|--|
| I can read and write numbers with up to three decimal places.       |  |
| I can compare the value of digits in the same place value position. |  |
| I can use < and > to compare numbers.                               |  |
| I can compare numbers with different numbers of decimal places.     |  |

Fractions | Comparing Decimals

| I can compare numbers with up to three<br>decimal places.           |  |
|---|--|
| I can read and write numbers with up to three decimal places.       |  |
| I can compare the value of digits in the same place value position. |  |
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Fractions | Comparing Decimals

| I can compare numbers with up to three decimal places.              |  |
|---|--|
| I can read and write numbers with up to three decimal places.       |  |
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| I can use < and > to compare numbers.                               |  |
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Fractions | Comparing Decimals

| I can compare numbers with up to three decimal places.              |  |
|---|--|
| I can read and write numbers with up to three decimal places.       |  |
| I can compare the value of digits in the same place value position. |  |
| I can use < and > to compare numbers.                               |  |
| I can compare numbers with different numbers of decimal places.     |  |

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