Comparing and Ordering Whole Numbers to 10

Mathematical Ideas

Comparing quantities or amounts in terms of more, fewer, or the same as helps with understanding the relationship between numbers.

Quantity is related to 'how many' rather than size, shape, or position.

Numbers can be compared by determining which one is greater than, less than, or equal to another number. For example,

9

9 is greater than 7

7 is less than 9

Sometimes it is useful to arrange numbers in ascending or descending order.
For example,

2, 4, 6, 8 are arranged in ascending order (least to greatest)

8, 6, 4, 2 are arranged in descending order (greatest to least)

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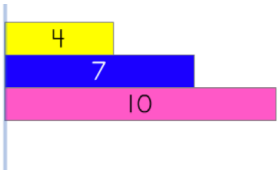
Helpful Information

Tips

- Learning tools are used to explore mathematical ideas and are a way for children to share their thinking. Encourage your child to take the time to use the learning tools for each activity.
- Organized concrete and visual representations allow your child to use their spatial sense to deepen their understanding of number and the relationships between numbers.



4 is less than 7
10 is greater than 7

Mathematical Words/Symbols

Fewer – less than
More – greater than
Same as – equal to

Materials

Activity 1:
- Set Tool

Activity 2:
- Pattern Blocks

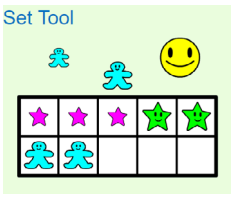
Activity 3:
- Colour Tiles
- Finger Cards

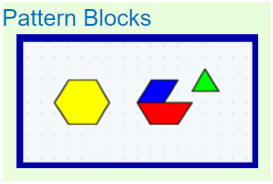
Activity 4:
- Whole Number Rods
- Tally Cards

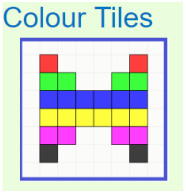
Activity 5:
- Rekenrek
- Number Cards

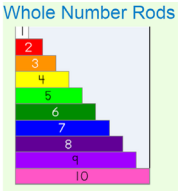
Activity 6:
- Whole Number Rods
- Number Cards

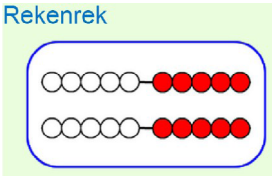
Activity 7:
- Number Line
- Dice Cards

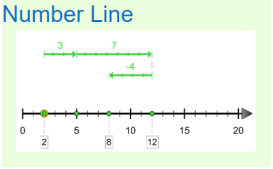












Comparing Using the Set Tool

Activity 1

Number of Players: 2-3

Set Up for the Game:

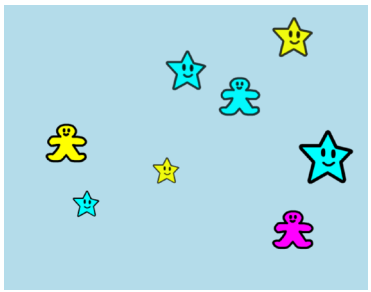
- Open the Set learning tool.
  - » choose the Auto feature

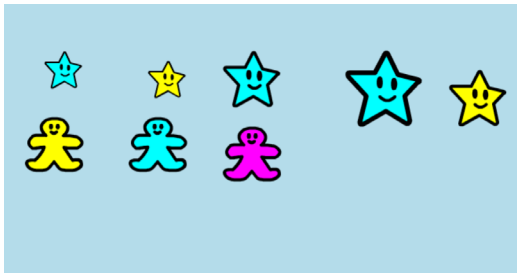
How to Play the Game:

1. Each player picks one of the shapes to use in the game.
   - » If only two players, deselect the unused shape.
2. Enter a number between 1 and 10 in Number of Objects. Hit Enter or select New.
3. The players group the objects by shape.
4. Players count the number of objects in each group.
5. Players compare the quantity in each group. The player who has the least number of objects wins the round and earns one point.
6. Select all the objects and move them to the recycle bin.
7. Repeat the steps; however, this time the player with the greatest number of objects will win the round and earn one point.
8. The game ends when one player earns 10 points.

Example:

Player 1: gingerbread
Player 2: star
Number of Objects: 8





Player 1: 3 gingerbread
Player 2: 5 stars

Your child may line up the objects to visually compare one to one to see who has more or fewer.

There are fewer gingerbread.
Player 1 earns a point.

Let's Talk About It

How do you know how many objects you have?
How do you know who has fewer?
How do you know who has more?
How can we change the objects so we each have the same?

One More or One Fewer Pattern Blocks

Activity 2

Set Up for the Activity:

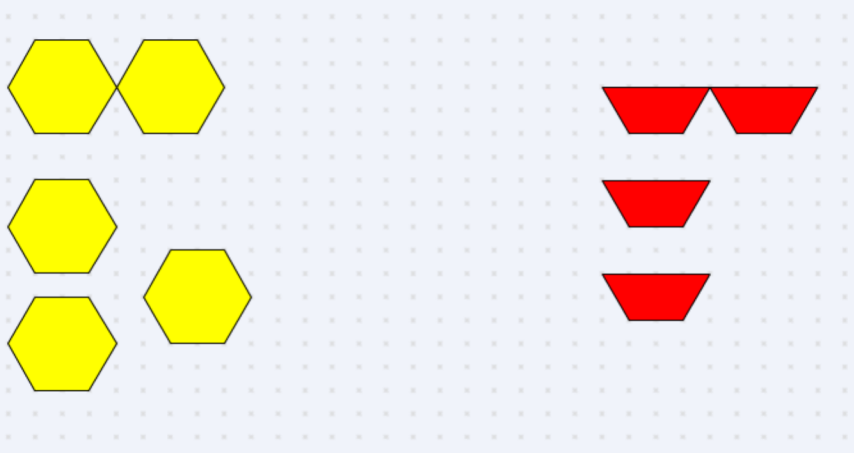
- Open the Pattern Blocks learning tool.
  - » place 1 to 10 blocks of one shape in the workspace

How to Do the Activity:

1. Ask your child to tell you how many blocks are in your set.
2. Have your child pick a different pattern block and make a set that is one more than your set.
3. Repeat several times having your child create sets that are one more, one fewer, or the same as your sets.
4. Repeat the activity having your child create the first set and challenging you to make the required set.

Example:

Set 1: 4 trapezoids



Your child may count the first set blocks and know that 5 is one more in the counting sequence.

Set 2: 5 hexagons
one more block

Let's Talk About It

How did you know how many blocks you needed?
How can you be sure have the right number of blocks in your set?
How many blocks would you put on the workspace if you were to have two fewer blocks than I have?

Comparing Using Colour Tiles

Activity 3

Set Up for the Game:

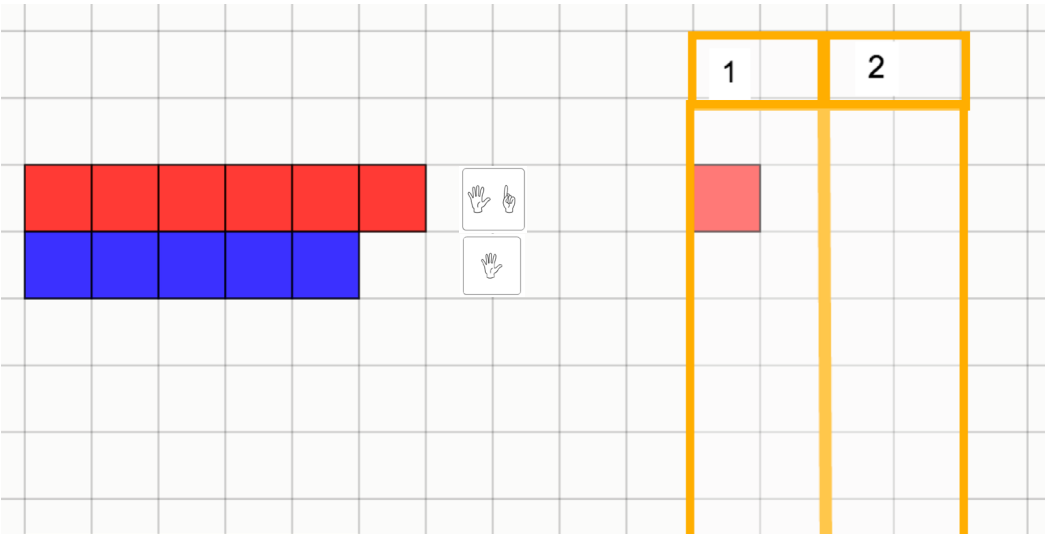
Numbers of Players: 2

- Open the Colour Tiles learning tool.
  - » use the annotation tool to draw a score chart on one side of the workspace
- Shuffle two sets of finger cards 0 to 10 and place them face down in a pile.

How to Play the Game:

1. Player 1 picks one card from the pile and states the number of fingers shown.
2. Player 1 then represents this quantity using one colour of tiles in a row.
3. Player 2 picks one card from the pile and states the number of fingers shown.
4. Player 2 then represents this quantity using a different colour tile in a row.
5. The player with the greatest quantity of tiles wins a point.
   - » move a colour tile onto the score chart to record the point
   - » if the quantities are the same both players get a point
6. Remove the game tiles before the next round.
7. Play 5 to 10 rounds. Vary whether the winner of a round has more or less blocks.
8. Count the tiles on the score charts. The person with the most tiles wins the game.

Example:



6 tiles is greater than 5 tiles
Player 1 earns one point.

Your child may move rows of tiles beside each other to confirm which has more tiles.

Let's Talk About It

How do you know who has more?
How can you change the tiles so you have more than I have?
Look at the finger cards and at the colour tiles, which ones are easier to compare?

Comparing and Ordering Whole Numbers to 10

Comparing Using Whole Number Rods

Activity 4

Set Up for the Game:

Number of Players: 2

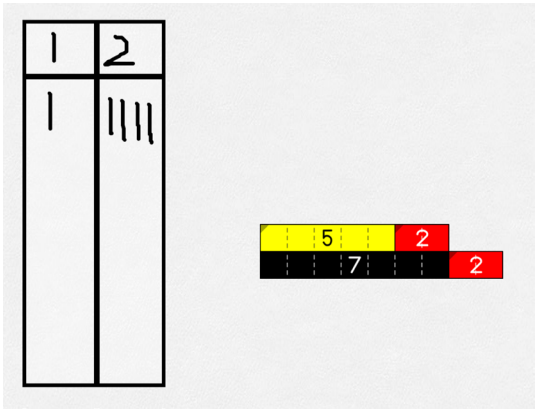
- Open the Whole Number Rods learning tool.
  - » use the annotation tool to draw a score chart on one side of the workspace
  - » be sure the rod labels are turned on (the default)
- Shuffle two sets of tally cards 2 to 10 and place them face down in a pile.

How to Play the Game:

1. Player 1 picks one card from the pile and represents this quantity using two whole number rods horizontally to form a train.
2. Player 2 picks one card from the pile and represents this quantity using two whole number rods to form a train.
3. The players compare their trains.
4. The player with longest train wins a point.
   - » use a tally mark on the score chart to record the point
   - » if the lengths are the same both players get a point
5. Move the trains into the recycling bin before the next round.
6. Play 5 to 10 rounds. Vary whether the longer or short train wins the round.
7. Compare tallies on the score charts. The person with greatest number of tallies wins the game.

Example:

Round 5: longest train wins



Player 2
Player 1

Player 1: 9 rod train
Player 2: 7 rod train
9 is greater than 7 so player 1 earns the point.

Your child may notice that both trains have a two and compare the five with the seven rather than comparing the whole trains.

Let's Talk About It

How do you know who has the longer train?
How can you make your train the same length as mine?
Who has more points at the end of this round?

Ordering Beads

Activity 5

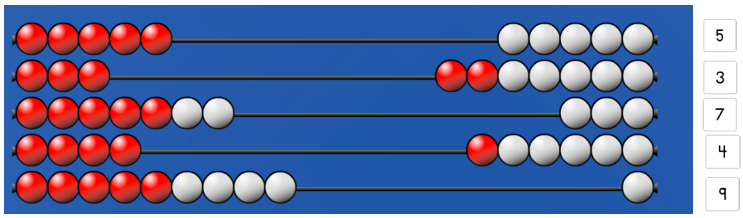
Set Up for the Activity:

- Open the Rekenrek learning tool.
  - » add racks until there are 5 racks on the workspace
- Shuffle number cards 1 to 10 and place face down in a pile.

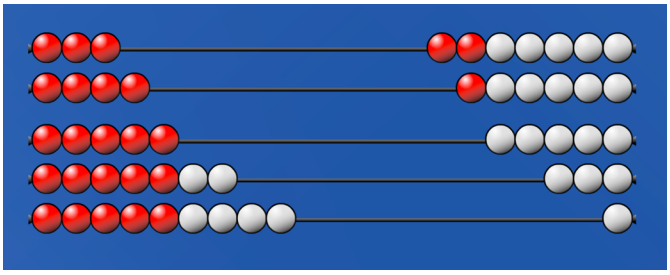
How to Do the Activity:

1. Ask your child to pick one card from the pile and tell you the number that is shown.
2. Have your child represent this number using one rack on the Rekenrek.
3. Repeat activity using a new rack each time.
4. Use the shade to cover the unused beads.
5. Ask your child which rack has the most beads and which rack has the fewest beads.
6. Remove the shade.
7. Have your child move the racks to show the beads in order from least to greatest or from greatest to least.
8. Slide the beads back to the right side of the racks.
9. Repeat as desired.

Example:



Beads in order



Your child may order the racks by placing the racks with the least and greatest number of beads first. Then place the other three racks relative to these.

Let's Talk About It

What was your strategy to order the racks of beads?
How can the colours of the beads help you which quantity is greater?
Look at the beads we didn't use (on the right side). What do you notice?

Comparing and Ordering Whole Numbers to 10

Ordering Using Whole Number Rods

Activity 6

Set Up for the Activity:

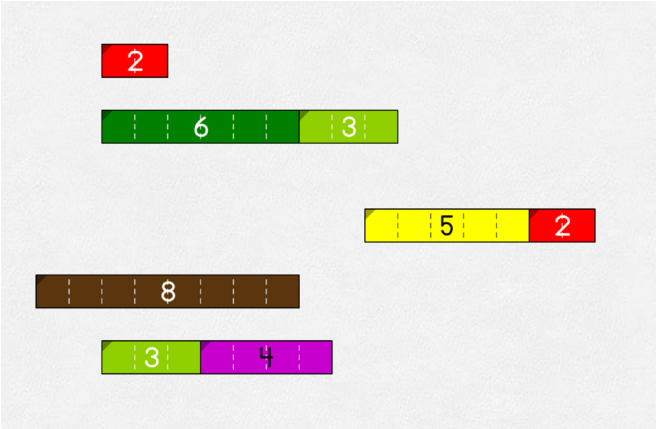
- Open the Whole Number Rods learning tool.
  - » be sure the rod labels are turned on (the default)
- Shuffle two sets of number cards 1 to 10 and place face down in a pile.

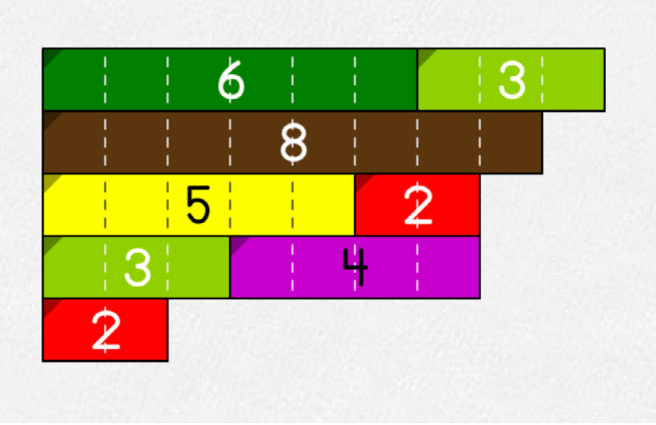
How to Do the Activity:

1. Have your child pick one card from the pile and represent this quantity using one or more whole number rods lined up horizontally to form a train.
2. Repeat step 1 until there are 5 trains on the workspace.
3. Ask your child to identify the longest and shortest trains.
4. Have your child order the trains from least to greatest or greatest to least.

Example:

2	9	7	8	7





Ordered from greatest to least

Your child may line up the trains to compare lengths and then order them.

Let's Talk About It

How do you know which train is longest?
What strategy did you use to order your numbers?

Comparing and Ordering Whole Numbers to 10

Comparing Using a Number Line

Activity 7

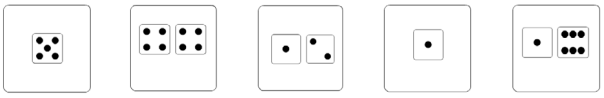
Set Up for the Activity:

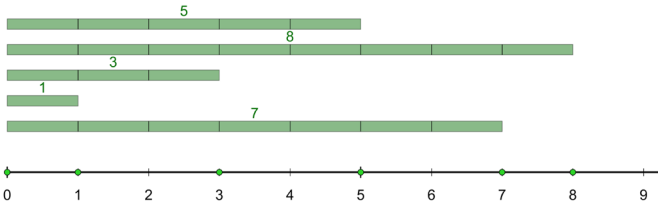
- Open the Number Line learning tool.
  - » select 0 to10
  - » select the number ribbon format
- Shuffle one set of dice representation cards from 1 to 10 and place face down in a pile.

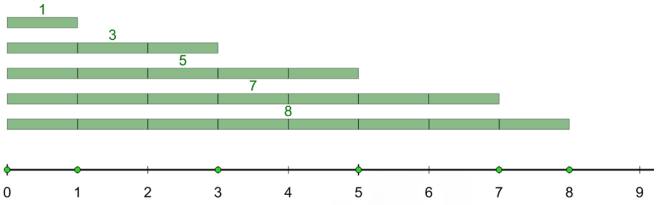
How to Do the Activity:

1. Ask your child to pick one card from the pile.
2. Have your child represent this quantity using the number line tool.
3. Repeat until there are five ribbons on the workspace.
4. Ask your child to reorder the ribbons so they are ordered greatest to least or least to greatest.
5. Repeat the task as desired.
6. Repeat steps 1 to 5 using the magnitude bar instead of the number ribbon.

Example:







Ordered from greatest to least starting from the bottom

Your child may order the ribbons by using the number sequence.

Let's Talk About It

What strategy did you use to order the numbers?
Name another number that could fit between your greatest and least numbers. Where would it go?
What number would be one greater than your longest ribbon?
What number would be one less than your shortest ribbon?