

At-Home Activities from *Investigations* **3**

Compare

The *Compare* games all involve comparing two quantities. The quantities might be single-digit numbers (e.g., which is more, 6 or 9?) or the answer when you add, subtract, multiply, or divide two (or more) numbers (e.g., which has the larger product, 6x8 or 7×7?). Some variations involve figuring out *how much more* one quantity is, compared to the other.

Kindergarten

Each player turns over one <u>Primary Number</u> <u>Card</u>. (You can also use playing cards without the face cards.) Players decide who has more. Full directions and variations <u>here</u>; you can also <u>play online</u>.

Players explain how they know which is more or how someone could figure it out. For example:



- "Six is bigger becomes it comes after 4 when you count."
- "Count the pictures."
- "Build towers and see which is taller."

Try More

- Play *Double Compare*. Players flip two cards on each turn. See directions & variations <u>here</u>. Play online with cards <u>0-6</u> or <u>0-10</u>.
- Occasionally ask, "Can you tell who has more without finding the total? ... If I have 6 & 4 and Lionel has 5 & 6, how could we tell who has more?"
 - "You have 6 and Lionel has 6. Lionel has more because his other card Is 5 and yours is 4 and 5 is more than 4."

Resources

MWI: <u>More</u>, <u>Fewer</u>, <u>Equal</u>

(CCSS: K.CC.A.1, K.CC.B.4.a, K.CC.B.4.b, K.CC.B.5, K.CC.C.6, K.CC.C.7)

Grade 1

Each player turns over 2 <u>Primary Number</u> <u>Cards</u> (without Wild Cards, or 2 playing cards without the face cards). Players decide who has more. Full directions and variations <u>here</u>; you can also <u>play online</u>.

Players explain how they know who has more. (Some will count or add to find and compare the totals. Others may not find the total but reason about the numbers.) For example:



- "They both have a 4, but Player 2 has an 8, and 8 is more than 7, so Player 2 has more."
- "Player 1 has 11 and Player 2 has 12. Player 2 has more."

Try More

 Play Double Compare Dots with <u>Dot Cards</u> <u>Set A</u> or <u>online</u> or with <u>Dot Cards Set B</u>. (Print 4 copies and cut apart to make a deck.)

(CCSS: 1.0A.B.3, 1.0A.C.5, 1.0A.C.6)



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Grade 2: Sticker Compare Grade 3: Multiplication Compare Each player turns over a sticker card. The Each player turns over 2 Digit Cards. The players players decide who has more and how many decide who has the greater product. There are more that player has. Full directions here. full directions here. This game can also be played online. Encourage the players to explain how they know who has more and how many more. For Encourage the players to explain how they know which product is greater. Some will multiply to example: find and compare the products. Others may not find the product but reason about the numbers. For example: Player 1 * * * * * * * * * * × "46 is 11 more than 35. I can see it in the stickers. In 46, there's 1 more strip of 10 and Player 2 1 more single. That's 11."

- "It's 11. I know that 35 + 10 is 45 and 46 is • one more."
- "46 is 11 more because 35 + 5 = 40 and then 6 more is 46 and I know that 5 + 6 = 11."

Trv More

• Use <u>Digit Cards</u> or playing cards (with the 10s and face cards removed). Players turn over two cards. Each card can stand for a number of tens or a number of ones. So, for example, a player that turns over a 2 and a 5 could make 25 or 52. Compare the numbers. Who has more? How many more?

(CCSS: 2.NBT.A.3 2.NBT.B.5)



- "I know 7 x 5 is 35. 6 x 8 is a hard one for me! • But I know 5 x 8 is 40 and 6 x 8 is one more 8. So, 6 x 8 is 48 and 48 is bigger than 35."
- "8 is bigger than 7 and we're multiplying 8 by • a bigger number than we are multiplying 7 by. So, 7 x 5 must be smaller than 6 x 8."

(CCSS: 3.0A.C.7)



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Grade 4: Decimal Compare

Each player turns over one <u>Decimal Card</u>. The players decide who has the greater number. There are full directions <u>here</u>. This game can also be played <u>online</u>.

Encourage players to explain how they know which number is greater. For example:



- "I always look at the tenths first. I saw that 0.45 has 4 tenths and 0.5 has 5 tenths, so I knew that 0.5 is a larger number."
- "I got confused because 45 is a bigger number than 5. But then I remembered that the 4 in 0.45 and the 5 in 0.5 are tenths and the 5 in 0.45 is 5 hundredths, which is really small compared to a tenth."

Try More

- Play Capture Fractions using <u>Fraction</u> <u>Cards</u> or <u>online</u>. The directions are the same as above except fraction cards are used.
- Use <u>Compare Cards</u> or <u>the online game</u> to play *Multiplication Compare*. See directions here.

(CCSS: 4.NF.C.7, 4.NF.A.2, 4.NBT.B.5)

Grade 5: Addition Compare with Fractions Each player turns over 2 <u>Fraction Cards</u>. Decide who has the greater total. Full directions <u>here</u> or play <u>online</u>.

Encourage players to explain how they know who has the greater total. Some add to find and compare the totals. Others may *not* find the total but reason about the numbers. For example:



- "I thought about 6/8 compared to 9/8 + 1/8.
 9/8 + 1/8 is 4/8 bigger than 6/8. So, in order for 5/6 + 6/8 to be bigger, 5/6 has to be bigger than 4/8. And it is!"
- "9/8 + 1/8 is easy, it's 10/8. 5/6 + 6/8 is hard. I know 6/8 is 3/4 & sixths & fourths are related to twelfths. 5/6 is equivalent to 10/12, & 3/4 is equivalent to 9/12. So they are 19/12. Hmm, it's hard to compare twelfths & eighths, but maybe I can compare them to a landmark. 10/8 is 1 2/8. 19/12 is 1 7/12. 1 2/8 is less than 1 1/2, and 1 7/12 is more than 1 1/2. Player 2's sum is bigger than Player 1's."

Try More

- Play Decimal Double Compare using <u>Decimal</u> <u>Cards</u> or <u>online</u>. The directions are the same.
- Play *Division Compare* using <u>Compare</u> <u>Cards</u> or <u>online</u>. See directions <u>here</u>.

(CCSS: 5.NF.A.1, 5.NBT.A.3.B, 5.NBT.B.6)