The following six transition lessons are designed to assimilate those who are new to The Good and the Beautiful Math curriculum starting out at Level 1 or for those who would like a general review before beginning Level 1. Administer these lessons before beginning Lesson 1.

These transition lessons vary in length and do not include all parts of a complete lesson as found in the Level 1 course. Within these transition lessons, terms, images, and mathematical ways of thinking that were introduced in Level K are covered to prepare the student for beginning Level 1. The Level 1 course may be started once the child has an understanding of the concepts taught in the transition lessons.

The only materials needed to administer the transition lessons are a pencil, scissors, optional crayons or colored pencils, 10 pennies, 1 dime, and 4 small bags. (Note: Transition Lesson C includes an optional activity that requires the use of either 10 toothpicks, 10 popsicle sticks, or 10 sticks found outdoors.)

Before beginning the lessons, cut out the manipulative pieces and store them in the bags.

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Note: Subitizing means being able to instantly recognize, without counting, the number of objects present in a small group. Helping children acquire this skill at a young age will allow them to more quickly develop mental math strategies in the future.

The Ten Frame

Read to the child: The white lines drawn on this chalkboard form a ten frame. A ten frame is used for counting, adding, subtracting, and more.

Count the number of turquoise dots on this ten frame. How many are there? [10]


When a ten frame has every box filled, it has ten items in it. Five are on the top row, and five are on the bottom row. However, sometimes not all the boxes on a ten frame are filled.

Look at the ten frames on this page and the next and write the number of dots shown. See if you are able to identify the number without counting each individual dot.
Look again at the ten frame with six dots. The ten frame shows us that six is five plus what? [one]

The number seven shown here is grouped as five dots on the top row and how many dots on the second row? [2] Five plus two equals seven.

Look at the ten frame of eight dots and fill in the blank:

\[5 + ____ = 8\]

Using the ten frame of ten dots, fill in the blank:

\[5 + ____ = 10\]

**Practice Memory Game**

To play this game of memory, cut out the Ten Frame and Number Cards found with the manipulatives at the end of the transition lessons. Mix all of the cards. Lay them face down on the table and arrange them in four rows of five.

Player one chooses one number card and one ten frame card. He or she should then turn the cards over to see if they are a match. (A match would be a numeral that is the same as the number represented on the ten frame.) If the cards are a match, the child keeps the match. If the cards do not match, the child returns them back to their spot on the table.

The next player takes a turn, playing in the same way.

The game continues with players taking turns until all of the cards have been matched. The player with the greatest number of matches is the winner.

**Ten Frame Number Practice**

Over the next few days, have the child practice matching the ten frames to the corresponding numbers. Have the child continue to practice until he or she is able to quickly identify the number shown on each ten frame.

Using the ten frame of nine dots, fill in the blank:

\[5 + ____ = 9\]

Begin the next transition lesson when the child is able to easily and quickly identify the number of dots shown on each 1–10 ten frame card.
Numbers 11–20

Using the ten frame cards from the previous lesson, lay the number 10 ten frame card on the table. Ask the child how many dots are shown on the card. [10] Lay the number 1 ten frame next to the number 10 ten frame. Ask the child how many dots there are now. [11]

Trade the number 1 ten frame for the number 2 ten frame. Then ask the child how many dots are shown now. [12]

Continue this exercise through the number 19.

Practice

Lay the number 10 ten frame card face up on the table. Mix up the remaining ten frame cards and lay them face down on the table.

Have the child turn over one of the face down cards and lay it next to the number 10 ten frame. Have the child color the ten frames below to match the number shown. Then have him or her write the number on the line next to it. Continue this activity until each card has been chosen.
One More Number

What number do you think two full ten frames make? Write the number on the line below the ten frames.

Yes! The number twenty is two groups of ten.
What Are Tally Marks?

Read to the child: How many lines are shown here?

Yes, there is just one line shown here. This is called a tally mark. Tally marks are a way to count and show numbers.

If we add a tally mark next to the first one, it looks like this.

How many tally marks do we have now? Yes, there are two tally marks. Write the number two next to the two tally marks.

Now write the number of tally marks shown in the two images below.

When we get to the fifth tally mark, we place the tally mark across the first four like this. This stands for the number five.

What number do you think five tally marks plus one more makes? Yes, six. Write the number six next to the six tally marks.

On each line, write the number of tally marks shown.
What is five plus five? Yes, just like five plus five equals ten, five tally marks plus five tally marks makes the number ten. When we write tally marks, we write them in groups of five.

![Tally Marks](image)

### Tally Mark Practice

Have the child find and match each number to the correct tally mark card. To do this, mix up the 1–10 number cards and the tally mark cards found at the end of the transition lessons. After he or she has matched the numbers with the corresponding tally marks, have the child place them in order from least to greatest.

**Note:** The next three activities may be done on a separate day depending on the needs of the child.

### More Tally Mark Practice

Mix up the tally mark cards and place them in a face down pile on the table. Have the child draw each card, one at a time, and identify the number shown.

### Optional Practice

A fun, hands-on way to practice making tally marks is to use toothpicks, popsicle sticks, or sticks found outside.

First, demonstrate how to show a specific number using the tally mark sticks.

Then place the 1–10 number cards face down on the table. One by one, have the child draw a number, then have the child create that number using the sticks.

### Writing Tally Marks

On the following column have the child practice writing tally marks for each of the numbers shown. Assist the child as needed, especially with the first few numbers. Have the child count out each tally mark as he or she writes it. Remind the child to place the fifth and tenth tally mark diagonally across the previous four tally marks.
Part-Part-Whole Addition

Lay the Part-Part-Whole Mat and the five banana manipulatives, found at the end of the transition lessons, on the table.

Read to the child: I am going to demonstrate how to use the Part-Part-Whole Mat to solve addition and subtraction problems. You will likely already know the answers to the problems. However, I will use these problems to help you understand how to use the Part-Part-Whole Mat so that, later, you are able to use it to solve harder problems.

- The Johnson family and the Larsen family met at the park one day for a picnic. The Johnsons brought three bananas in their picnic basket. Lay three bananas in one Part section of the mat. The Larsens brought two bananas in their basket. Lay two bananas in the other Part section of the mat. How many bananas did they bring all together? Yes, they brought five all together. Three plus two equals five.

Now it's your turn to try. Clear the bananas off the Part-Part-Whole Mat.

Read the following story aloud to the child and have him or her demonstrate, with the bananas and the mat, how to solve the problem. Help the child as needed.

- Jack and Carrie were helping their mom shop at the grocery store. Their mom asked them to pick out some ripe bananas. Jack gave his mom four bananas. Carrie gave her mom one banana. The child should place four bananas in one Part section and one banana in the other Part section. How many bananas did the kids give their mom all together? The child should move all the bananas up to the Whole section. Yes, four plus one equals five.

Read the next story to the child and have him or her solve the problem using the bananas and mat. Encourage the child to demonstrate how to solve it without your help.

- The Paewai family went to the zoo one day. At the monkey cage, they watched as the zookeeper fed the monkeys. The zookeeper gave one monkey two bananas and another monkey two bananas as well. How many bananas did the two monkeys have all together? The child should demonstrate this problem by placing two bananas in one Part section and two more bananas in the other Part section. Then the child should slide both sets of bananas up to the Whole section; making four all together.

Part-Part-Whole Subtraction

Now we are going to use the Part-Part-Whole Mat to solve subtraction problems. I'll demonstrate the first story.

- There are five bananas in the kitchen pantry. Place five bananas in the Whole section.
Jasmine takes two bananas for her and her little brother. **Move two bananas to the Part section on the left.** How many bananas are left in the pantry? **Slide the other three bananas to the Part section on the right and point to them.** Yes, there are three bananas left over in the pantry. Five bananas take away two bananas equals three bananas.

Now I’d like you to try a subtraction problem. **Clear the bananas off the Part-Part-Whole Mat.**

- There are five bananas left on the grocery store stand. **Have the child place five bananas in the Whole section of the mat.** Jeremiah buys four of the bananas. **The child should slide four bananas to the Part section on the left.** How many bananas are left on the grocery stand? **The child should slide the last banana to the Part section on the right.** Yes, five bananas take away four bananas equals one banana.

Have the child solve this last problem on his or her own.

- Samantha has four bananas. She decides to eat one. How many bananas will she have left? **The child should lay four bananas in the Whole section.** Then the child should move one banana to the Part section on the left. Lastly, the child should move the other three bananas to the Part section on the right.

### Fact Families

Clear the Part-Part-Whole Mat and leave it on the table. Next to the mat, lay out the five people manipulatives found at the end of the transition lessons.

This is the Tanaka family. The Tanaka family consists of Riki, the father; Hana, the mother; Chika, the oldest; Kobe, the middle child; and Ren, the youngest. **How many people are in the Tanaka family?** [5]

At the top of the page is the Tanaka family’s home. I’ll write the number five in the top window so that we can remember five people live there. **Write the number five in the top window of the roof.**

How many grownups are in the Tanaka family? [2] **Move the mom and dad to the Part section on the left side of the Part-Part-Whole Mat.** Then write a number two in the lower left window of the roof.

How many children are in the Tanaka family? [3] **Move the three children down to the Part section on the right side of the Part-Part-Whole Mat.** Write the number three in the lower right window of the roof.

**What addition problem does the Tanaka family show on the Part-Part-Whole Mat right now?** Yes, two parents plus three children equals five people total. **Slide all five family members up to the Whole section.** Then fill in the first row of white boxes of the home with the addition problem $2 + 3 = 5$. 
Could we switch the sides of the mat that the children and the parents are placed on and still get the same answer? Slide the three children down to the Part section on the left and the parents to the Part section on the right. Yes, three children plus two parents equals five people. Slide the five people up to the Whole section. Then fill in the next row of boxes with the addition problem $3 + 2 = 5$.

One day the Tanaka parents decided to go out on a date. Slide the two adults down to the Part section on the left. How many children did that leave at home? [3] Slide the three children down to the Part section on the right. What subtraction problem did we just make? Yes, five people take away two people leaves three people remaining. Fill in the next row of boxes of the home so that the subtraction problem reads $5 - 2 = 3$.

Slide all five people back up to the Whole section of the mat, then continue reading. The next day, the three children went to the zoo with their grandparents. If there were five people home and three left, how many people does that leave at home? Slide the three children down to the Part section on the left and the two adults down to the Part section on the right. Yes, that leaves two people still at home. Fill in the last row of boxes of the home so that the subtraction problem reads $5 - 3 = 2$.

Let's look at the addition and subtraction problems that are on the Tanaka family's house. Which three numbers are in every single math problem on their house? [2, 3, 5] This is called a fact family. We will learn more fact families in future lessons.
Note: Some 3D shapes are referred to by different names depending on the source. In this curriculum the 3D shapes shown in this lesson will be referred to with the following names: sphere, cube, cylinder, pyramid, and rectangular prism.

2D and 3D Shapes
Cut out the 2D and 3D Shape Cards found at the end of the transition lessons. Set aside the two cards that say "2D" and "3D." Mix up the remaining shape cards and lay them out face up on the table.

What do you notice about all of these different shapes? Pause for response. Do you see how some of the shapes look flat like a drawing on a paper, but some of the other shapes look as if they were real objects that would take up space?

Let’s sort the shapes into two groups. One group will be for the flat shapes. The other group will be for the shapes that take up space.

Help the child sort the shapes so that the 2D shapes are grouped together and the 3D shapes are in another group.

We call shapes that are flat two-dimensional, or 2D shapes. Lay the card that says "2D" with the 2D shapes.

We call shapes that take up space three-dimensional, or 3D shapes. Lay the card that says "3D" with the 3D shapes.

Shape Names
Put away the pyramid and rectangular prism cards as well as the cards that say "2D" and "3D."

Point to each shape that you know the name of and tell me its name. Set aside any shapes for which the child already knows the name. Continue to practice with the child, naming the remaining shapes. Over the next few days, practice the names of the shapes the child does not know. Continue until he or she is able to name each of them without help.

Practice ideas include:
• Hide the shape cards in different spots around a room. Have the child find each card. As he or she finds one, have the child name the shape shown on the card.
• Lay the shape flashcards on the floor. Name a shape and have the child jump over that specific shape.
• Lay the flashcards face down on the table. Have the child turn over one card and name it. Then go on a hunt throughout the house to find specific things with the same shape. Have the child name the shape each time he or she finds an example of it.
• Lay the cards in a face-down pile on the table. Have the child turn over the top card. Then have the child name the shape on the
If the child is able to name it without help, he or she gets to keep the card. If the child doesn’t remember the name, say the name, and then you get to keep it. After all the cards are drawn, the winner is the player who collected the most cards. Play again with the shapes the child did not know the first time.

- The next time you take a ride in the car, have the child look for shapes along the way.

**How Long is One Second?**

Do you know what a second is? Pause for response. A second is one way we measure time. A second lasts about as long as it takes to say "one alligator." Try that with me and clap when you say "one." Ready, go: "one alligator."

Now let’s see how long ten seconds is. For each number, we will clap and then say "alligator." Ready, begin: "one alligator, two alligator," etc.

How many seconds do you think it would take you to write your first name in your very best handwriting? Have the child write his or her name in the box at the bottom of the page as you count the seconds out loud.

Great! Now how many seconds do you think you could balance on one foot? Let’s count the seconds out loud as you balance.

**One Second or One Minute**

I’m going to read you some scenarios. You tell me whether it is something that would normally take one second to do or one minute to do.

- snap your finger [one second]
- look at a short picture book [one minute]
- pick up a small toy off the floor [one second]
- get dressed [one minute]
- slide down a slide [one second]
- say the word "elephant" [one second]
- pick up a box of spilled blocks [one minute]

Over the next week or two, periodically review the length of one second and one minute with the child.
The Penny

Lay out on the table the 10 pennies and the fruit price tag cards found with the manipulatives at the end of the transition lessons.

Today we are going to learn about the penny and dime. Hand the child a penny. This is a penny. A penny is worth the smallest amount of money in our money system. It is worth one cent. When we write one cent, we write a “1” with a cent sign after the number one. Write 1¢ on the line below. This is how we write one cent. We use the cent sign when an amount of money is less than a dollar.

Practice

How many pennies are shown here?

Yes, there is just one penny shown here. This is one cent. Write 1¢ on the line below.

How many pennies are shown here?

Yes, there are two pennies shown here. This is two cents. Write “2¢” on the line below.

Place six pennies on the table. How many pennies are here? Pause for response. Yes, there are six pennies here. Do you know how much six pennies are worth? Six pennies are worth six cents. We write six cents like this. Write “6¢” on the line below.

Now it’s your turn. Write the amount of money shown below each of the images on the next page. Don’t forget to write the cent sign.
Buying Items

We are going to practice counting how many pennies we have. Let's pretend we are buying fruit at the store. Lay the price tag cards out on the table. Tell the child to choose the price tag card of an item they would like to buy and count out the number of pennies needed to buy the item. Have the child continue this until all of the price tag cards are used.

Ten Pennies Equal a Dime

Give the child ten pennies. Show the child the price tag card worth 7¢. Let's pretend that I am selling this for seven cents. How many pennies would you need to give me to buy it? [seven] Have the child count out seven pennies and give them to you in exchange for the price tag card.

Now show the child the price tag card worth 10¢. Let's pretend that I am selling this for ten cents. How many pennies would you need to give me to buy it? [ten] Have the child count out ten pennies and give them to you in exchange for the price tag card. Good!

Pennies are not the only coins we can use to buy things. We have other kinds of coins that we can use, too. Instead of giving me ten pennies, you could give me one dime. Show the child a dime. This is a dime. A dime is worth ten cents. That means that a dime equals the same amount of money as ten pennies.

I would like you to trade these ten pennies for one dime since they are worth the same amount. Trade with the child.

Play the store buying game again, only this time when the 10¢ price tag card is shown, have the child pay with one dime.

After completing these lessons, the child is ready to begin the Level 1 Course Book Part 1.
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Manipulatives - Price Tag Cards

2¢

3¢

4¢

5¢

6¢

7¢

Level 1 Math