

QuickStudy

Three-Dimensional Shapes

Shapes can be three dimensional too. That means they're not just flat like squares or circles on a page. For instance, a **cylinder** is like many circles on top of each other. Your parents may have cylinders in the kitchen if they have a container of salt or spice bottles.



We can also describe shapes by where they are.



What shape is above the **cube**

Is anything beneath the **sphere**

You Can Do This!

You can make your own three-dimensional shapes too. Get an adult to help you get cheese cubes and toothpicks. The cheese cubes will be the corners of your three-dimensional shapes and the toothpicks will be the sides.



COUNTING & NUMBER NAMES CCC.A.1, K.CC.A.2, K.CC.A.3 , K.CC.B.4.A, K.CC.B.4.B, K.CC.B.4.C, K.CC.B.4

You can count starting from any number. First we pick a number, any number. I'll pick **5**. What's next after 5? **6**! What's next after 6? **7**!

We're counting by ones.

EX: 5, 6, 7, . . .

Try It! Now you pick a number and count. Can you write your counting too?

You can count by other things besides just ones. You can **count by tens**.

0 10 20 30 4<u>0 50 60 70 80 90 100</u>

Try It! Count your ten fingers and ten toes. <u>Whisper:</u> 1, 2, 3, 4, 5, 6, 7, 8, 9 <u>Shout:</u> 10 <u>Whisper:</u> 11, 12, 13, 14, 15, 16, 17, 18, 19 <u>Shout:</u> 20

The numbers from **0** to **9** are called *single-digit numbers*. The numbers from **11** to **19** are called *teen numbers*.

Try It! Try counting aloud from **O** to **2O**. Now try writing a number to show how many people are in the room with you. (Answers will vary.) Write a number to show how many buttons you have on your clothes. (Answers will vary, and the Kindergartener may have 0 buttons.)

Now look at the picture on the bottom left-hand corner of this page. How many cheese cubes are there? (13)



Touch the first turtle. That's the first number, **1**. The next one is **2**. Each turtle gets a number. How many do you count until you run out of turtles? That's right. There are **3** turtles.

Try counting things around the room. How many chairs can you find? How many children can you find?

QuickStudy

Think about the numbers from **1** to **20**. Each of those numbers mean something, but only once you say what they mean.

1 dog

could be 1 chicken

or 1 pig

Until we decide, it could be anything. Similarly, any object or set of objects can be given a number. For instance, how many cute kittens are on this page? Unfortunately none, so there are **O** cute **kittens** on this page.

You Can Do This!

How many items are in each of the pictures? Count them. (3 boats, 12 balls, 5 buckets)



COMPARING NUMBERS K.CC.C.6, K.CC.C.7

Whenever you have two different numbers, one of them is bigger and one of them is smaller. That's called comparing. Let's try comparing numbers.



We are comparing 2 and 5. Which one is bigger? Which one is smaller?

Let's look at the cubes below the numbers. With your finger or a marker draw a line from the first cube under **2** to the first cube under **5**. Now connect the next cube

under 2 to the next cube under 5. Keep going until you run out of cubes under one of the numbers. The number with the leftover cubes is the larger number. (5)



You can use pictures to compare even if there isn't already a picture.

Try It! Let's use a **drawing** strategy to compare **6** and **4**. Which one is smaller? Since there is no picture, draw your own. It doesn't matter what you draw, so let's pick something easy like circles. Draw **6 circles** and **4 circles**. Match the circles as we did with the purple and blue cubes. Which number runs out of circles first? (4) So we say 4 is smaller.

Try It! Compare **5** and **8**. Use the same drawing strategy. Which is larger? (8)

UNDERSTANDING ADDITION & SUBTRACTION K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.5

Addition is when you combine similar objects to get one total.

EX: You have 5 fingers on each hand, so if you *add* them together, you will find you have 10 fingers all together. Count them and see. *All together* is a phrase that usually means to add.

You Can Do This!

Lisa and Rashawn went to the zoo yesterday. Lisa saw a group of **5** manatees, and Rashawn saw **2**. How many did they see all together?



Probably the easiest way to approach this one is to **count** the manatees, touching each one. You should get 7 manatees *total*. (*Total* is a phrase that we use a lot when we're adding.)

You could have also written the problem out to see the numbers away from the words. So you might write 5 + 2 = 7. Yet another very useful method is to draw it.

Try It! While at the zoo, Rashawn also saw a troop of **5** monkeys. Lisa saw **4** monkeys playing. How many monkeys did they see total? (9)



Some problems you can solve with just your fingers.

Try It! Lisa brought her daddy to the zoo. Rashawn brought his mommy and two aunts. How many grown-ups did they bring to the zoo all together? (4)

Some other situations call for something called *subtraction* or *take-away problems*.

EX: Milli's mommy made 8 fruit smoothies last week. If Milli drank 5 of them, how many were left for the rest of Milli's family?

You wouldn't want to add for this one because we already know there were 8 total. Instead some of the smoothies were taken away when Milli drank them. **Try it on your fingers:** Put up 8 fingers, one for each smoothie. Then put down 5 of them for the smoothies Milli drank. How many are left? (3)

EX: If Milli's brother Emerson baked 9 cupcakes with his mom last week, and at lunch they ate 6 of them, how many were left? Try drawing a picture to answer this one. First draw 9 cupcakes, and then put an X over 6 of them. Now count the cupcakes that don't have X's. How many are there? (3)

Show illustration if Kindergartener appears confused.



Try It! Emerson and Milli went to the beach the other day with their mom. They found **8** pieces of sea glass. If Emerson found **6** of them, how many did Milli and her mom find?

Sometimes you'll see problems where you could **add** or subtract to get the right answer, depending on how you want to solve the problem.

EX: Milli and Emerson's mother puts 10 grapes on the table. What are two ways they could share the grapes?

You have **10** fingers, so **fingers** are great tools for this problem. Put up your 10 fingers to be the 10 grapes, but then squeeze all your fingers together except for 1



by itself. That's one way to split up the grapes. How many grapes would each child get in that scenario? Count your fingers. (9 for one child and 1 for the other)



You could also pick a number you want to make 10 with. So let's pick 6. Put up 6 fingers. How many more fingers do you need to get 10? Put up 4 fingers.

Now write your answer using numbers.

10=6+4

You Can Do This!

Milli and Emerson's mom poured **5** cups of milk during dinner. What are two ways the siblings could have shared the milk?

(0 and 5, 5 and 0, 1 and 4, 4 and 1, 2 and 3, 3 and 2) Show illustration if Kindergartener appears confused.

5=2+3



FOUNDATIONS OF PLACE VALUE KNBTA.1, K.OA.A.4

Teen numbers are the numbers **11** through **19** which can be formed by adding 10 to a single-digit number.

EX: 13 is 10 + 3.



Try It! How could you break down 14? (10 + 4)

Friendly numbers like **10** are another way to add and subtract. Friendly numbers are easy numbers that you feel comfortable with.

EX: You and your best friend go to a music store to try out instruments. You play 8 different guitars, and your friend plays 5 trumpets. How many instruments did you play all together?

Show illustration if Kindergartener appears confused.

Friendly numbers works with subtraction too.

EX: The music store has **13** drums. Together you and your friend buy **6**. How many are left?

So first let's go from 13 to **10**. 10 plus what is 13? (If you're not sure count up 3 from 10: 11, 12, 13.) We subtracted 3 of the 6 you bought.



Second we need to subtract 3 more from 10. (10, 9, 8.) There were seven drums in the store after you and your friend left.

MEASUREMENT & DATA K.M.D.A.1, K.M.D.A.2

You can measure all kinds of things. For instance, I am thinking of someone who is shorter than your parents and probably heavier than your chair. But how tall? How heavy?



Let's say we want to know the length of the crayon. We have lined up the end of the crayon with the zero on the ruler. A *ruler* is a tool you can use to measure. This one measures in inches. Now look at the ruler and the crayon. Look at the point of the crayon. What number do you see there? (2) That 2 means the crayon is **2 inches** long

Now you could draw a picture or do this many different ways, but let's try using **10** as a friendly number. We know we need to add 8 and 5. Put up **8** fingers. How many more to 10, our friendly number? (2) Write down 2 so you don't forget it. Now how many more instruments do we need to count if we've counted **2**? We need to add **3** more, so count up from 10 on your fingers. 11, 12, 13. You and your friend tried out 13 instruments!



You Can Do This! You bought a recorder at the music store which plays 16 notes. You have learned how to play 8 notes. How many more notes do you have to learn? (8)

Try It! Put a pencil by the ruler to measure it.

.

Make sure you line up one end of the pencil with the end of the ruler.

How long is the pencil?

Make sure you answer in inches.

What else could you measure about the pencil? (Weight, height)

Measurment & Data (continued)

We can also compare objects without measuring them. For instance, which one is bigger, your pillow or a car? Your pillow is much shorter and lighter in every way.

Which child is taller? We don't know how many inches either child is, but the child on the left is taller.



QuickStudy

Try It! Compare a firetruck, a crayon, and a cow.

than the firetruck. The cow is (smaller, shorter, lighter)

The firetruck is than the crayon. (larger, longer, heavier)

The crayon is than the cow. (smaller, shorter, lighter)

CREATING SHAPES K.G.B.6



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