Entering 1st Grade

Summer Math Work

WCS

Name: _____

Dear Families,

It is so important for children to keep learning over the summer! Research shows that students can lose up to 2.6 months of math learning during the summer months. 2 hours of work each week in math can help prevent this summer learning loss. This packet will be your child's first math grade of the year and is due when we return in the fall.

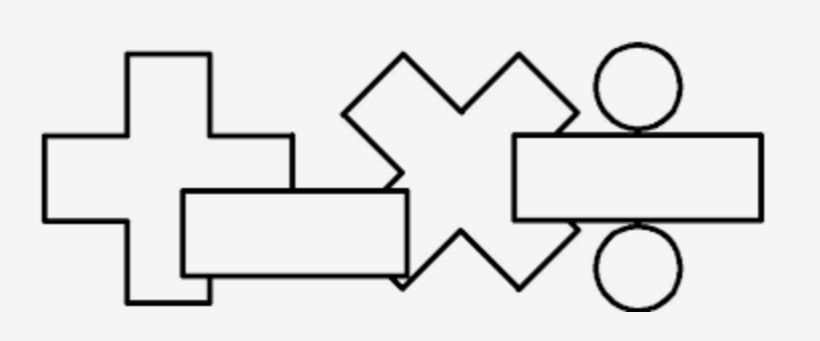
In this packet, you will find 10 weeks of work, about 2 hours of work each week. We suggest you create a schedule that works for your family each week. Maybe you spend 15-30 minutes in the mornings working on this math work each day or maybe your child completes it all on Sunday evenings-- whatever works for you. Please do try to spread it over 10 weeks- don't try to do it all the last week of summer!

Directions are on the following page.

Happy summer!

Directions

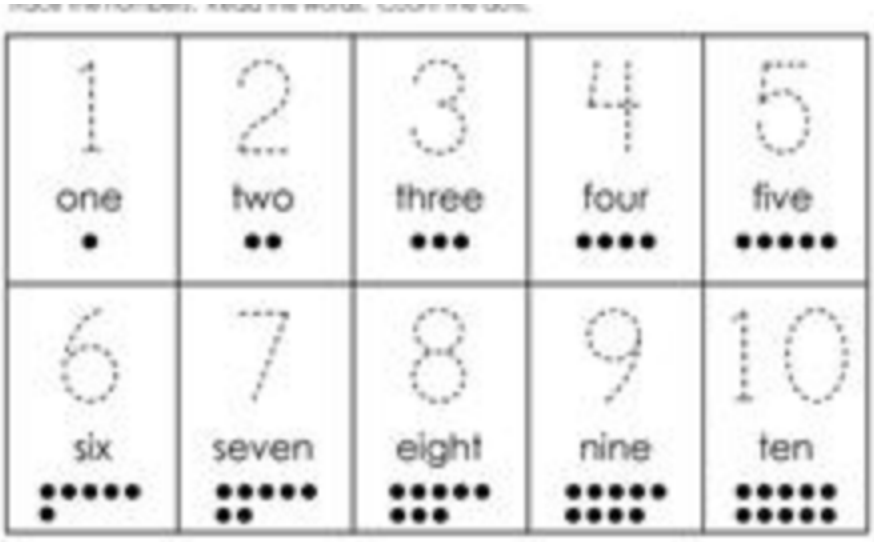
1. Read the student and family page each week.
2. Try the activity of the week.
3. Complete the math pages.



New 1st graders should..	Families should...
❑ Talk to your family about completing the activity of the week. Write or draw about what you did. ❑ Do your math pages each week. Make sure you show your work!	❑ Talk to your child about the math they are doing. There are questions you can ask on the family instruction page and activities to do together as a family. ❑ Reach out to Mr. Jack with any questions!

Week 1

I can... say and write numbers.



For Families

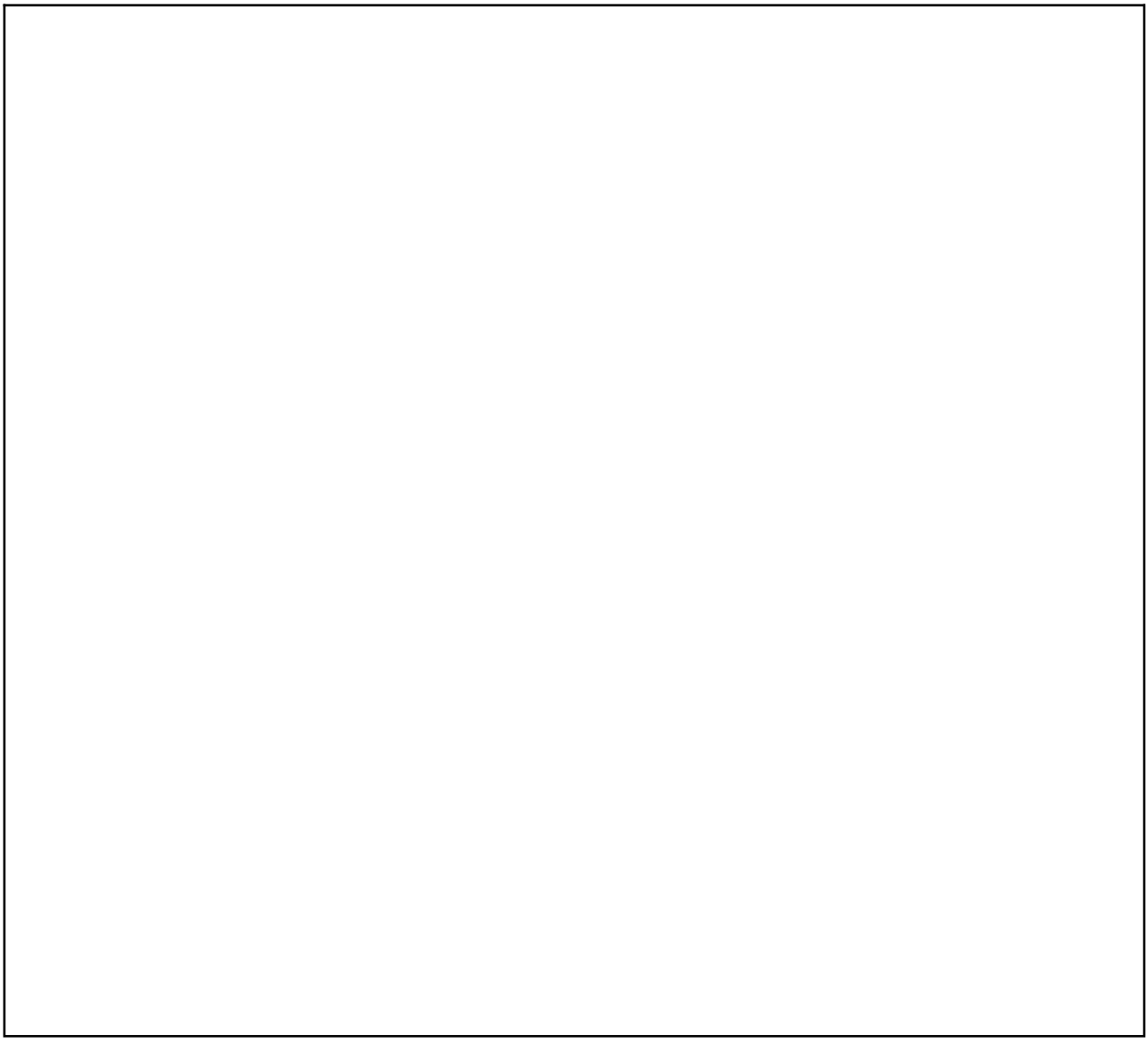
Understanding the math: Students in kindergarten learned how to write and name numbers to 20. You might still see your student using their fingers to count or show numbers-- that's a good thing! Using fingers is an excellent tool. It can help your child see relationships between numbers. For example, 7 is made up of 2 and 5 and 10 is made of two fives! This week may start out easy, but is good review and practice for your child.

Resources:
-Try building numbers at : https://apps.mathlearningcenter.org/number-frames/
-Numbers are everywhere! Talk to your child about numbers they see in their daily lives. Ask them to search for a certain number in your house, or find numbers on your walk or drive somewhere.

Questions to Ask Your Child :
-Where do you see numbers in our house? What numbers do you see?
-How do you write a 4? A 10?
-What number is this? How do you know?
-How many 7s can you find in our house?

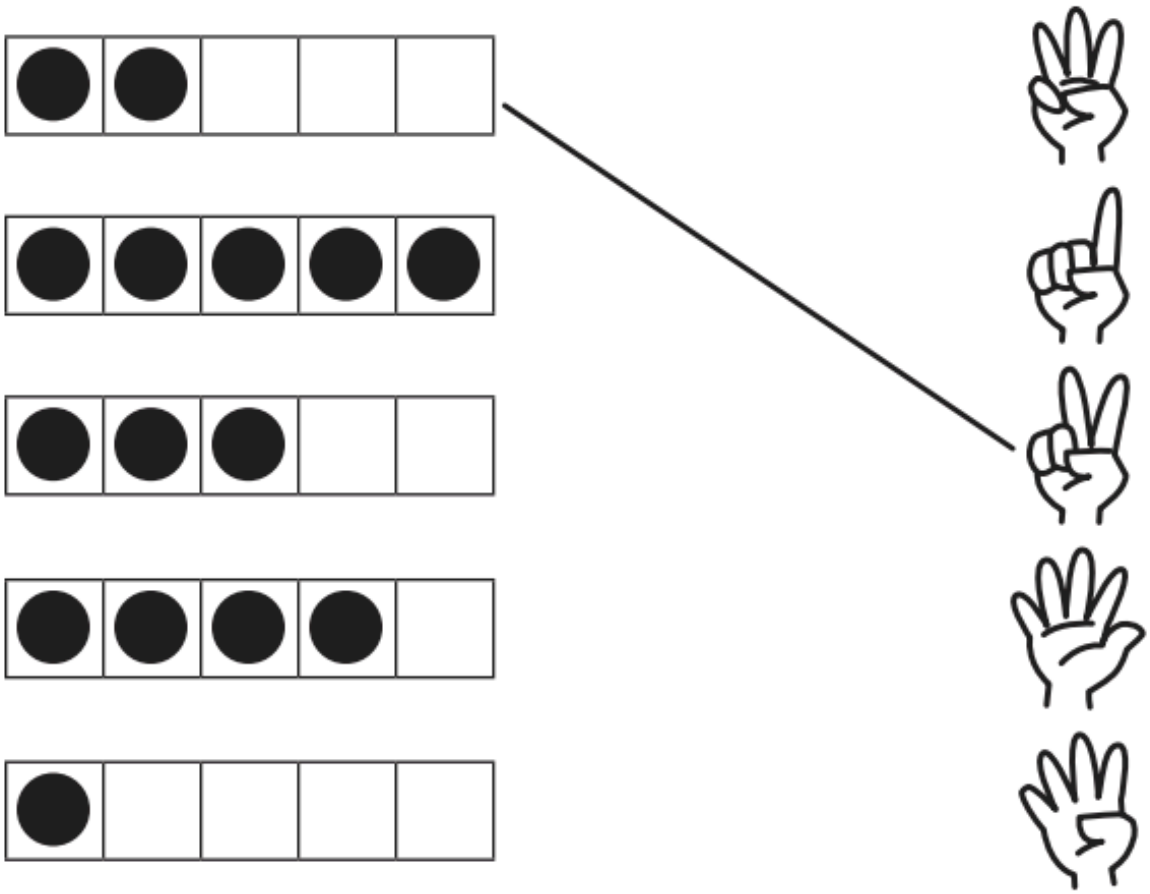
Activity of the Week

Write all the numbers 1-10 and their names in an interesting way. Some ideas: paint, written in sand, sidewalk chalk, a paint brush with just water, in the air with your finger, with playdoh or think of your own creative way. Write or draw a picture of how you made your numbers.

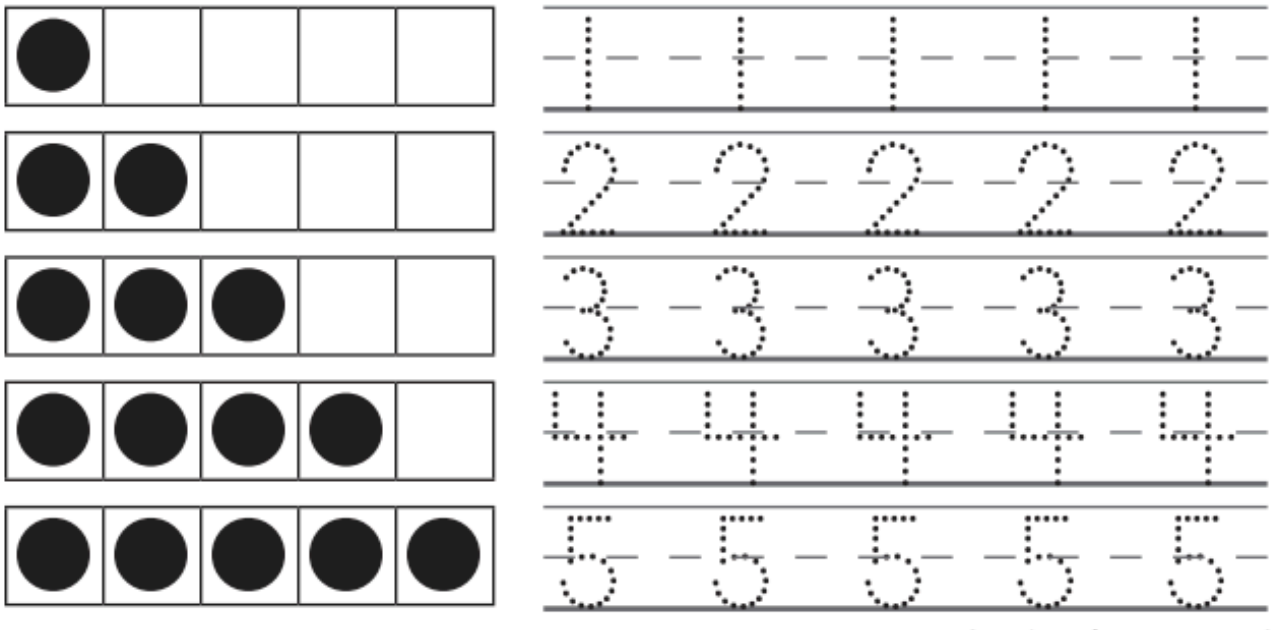


How Many to Five? page 1 of 2

1 Draw a line from each five-frame to the finger pattern that shows how many.



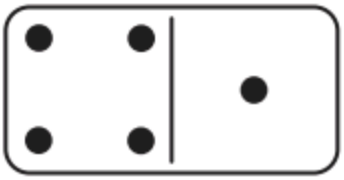
2 Practice writing the numbers that show how many dots are in each five-frame.



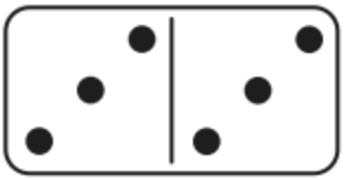
Count & Match to Ten page 1 of 2

More Dots

Count the dots on each domino. Trace the numerals.



5 5 5 5 5



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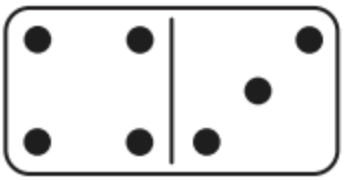

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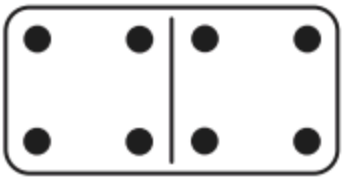
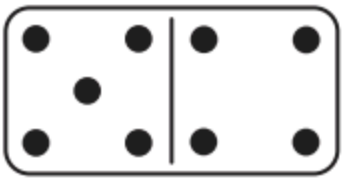
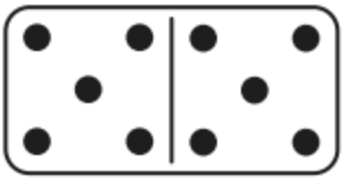


8 8 8 8 8



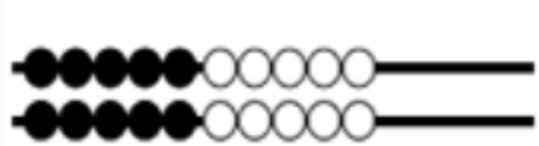
9 9 9 9 9



10 10 10 10 10

Week 2

I can... count and build numbers to 20.



For Families

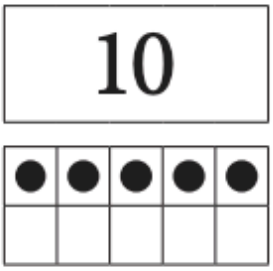
Understanding the math: For teen numbers, kindergarteners should be thinking of them as ten and some more. So 13 would be ten and three. This will help them when they think about adding and subtracting larger numbers. The addition problem 12+13 is challenging for a 1st grader, but if they think of it as 10 and 2 and 10 and 3- they can easily count by 10s to get 20 and add 2 and 3 to get 5. 20 and 5 is just 25!	
Resources: -If your child is struggling to think of teen numbers as ten and some more, have them build teen numbers using the number rack app. Encourage them to use ten on the top and then count on. https://apps.mathlearningcenter.org/number-rack/ - Go on a teen number hunt! See how many teen numbers you can find on a walk, drive, or in your house!	**Questions to Ask Your Child :** - Ten and how many more make 17? - Tell me a way to make 13. - How many ___ do I have? How do you know? (encourage your child to make groups of 10!) - Collect 15 rocks. How did you know there were 15?

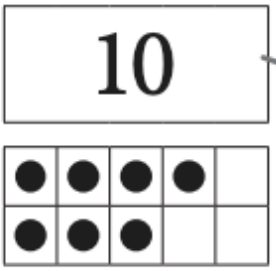
Activity of the Week

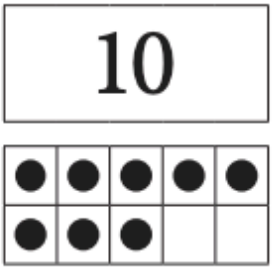
Write all the numbers 11-20 and their names in an interesting way. You can do the same as last week or a different way! Some ideas: paint, written in sand, sidewalk chalk, a paint brush with just water, in the air with your finger, with playdoh or think of your own creative way. Write or draw a picture of how you made your numbers.

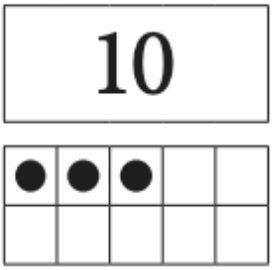
Numbers & Ten-Frames Version A

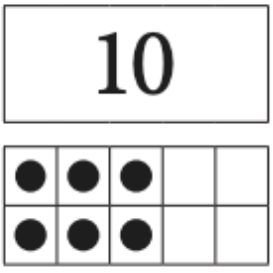
Match the number of dots to the numbers. Remember that the top ten-frame is covered by 10s. Then trace the numbers. One has been done for you as an example.











18

15

13

16

17

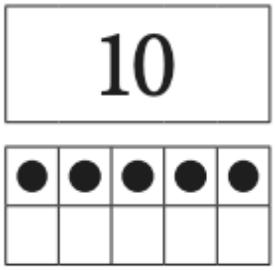
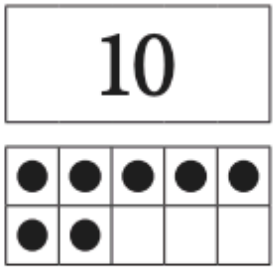
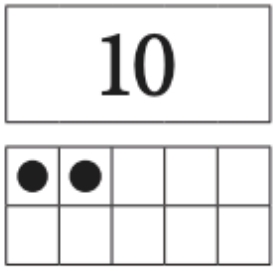
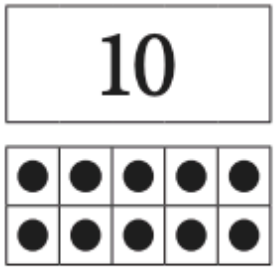
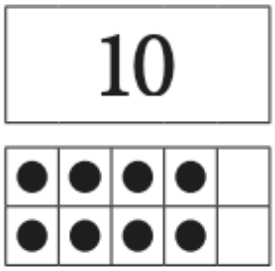
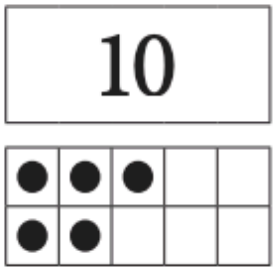
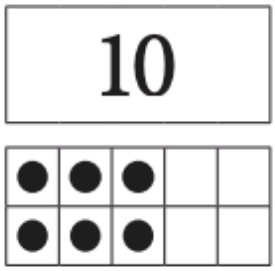
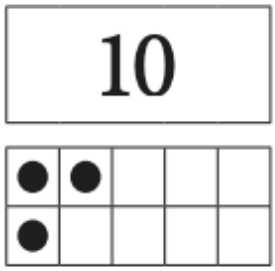
Count the Spots Version A

1 Trace each numeral.

11 12 13 14 15

16 17 18 19 20

2 How many spots? Remember that the top ten-frame is covered by 10s.

a 	**b** 	**c** 	**d** 
e 	**f** 	**g** 	**h** 

Week 3

I can... count forwards and backwards.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

For Families

Understanding the math: By the end of kindergarten, students should be able to fluently count to 100 by 1s and 10s. It's important that they not just be able to count forwards, but also backwards. Think about the alphabet- when your child was very small, they might have said “elemenopee” rather than L, M, N, O, P. They had just memorized the alphabet song, rather than the letters and their order. The same thing can happen with numbers. Counting backwards ensures they really understand what numbers come before and after.

Resources:

-**Count everything!** No matter where you are this week, there are things to count. Use some of the questions at the right for some ideas.

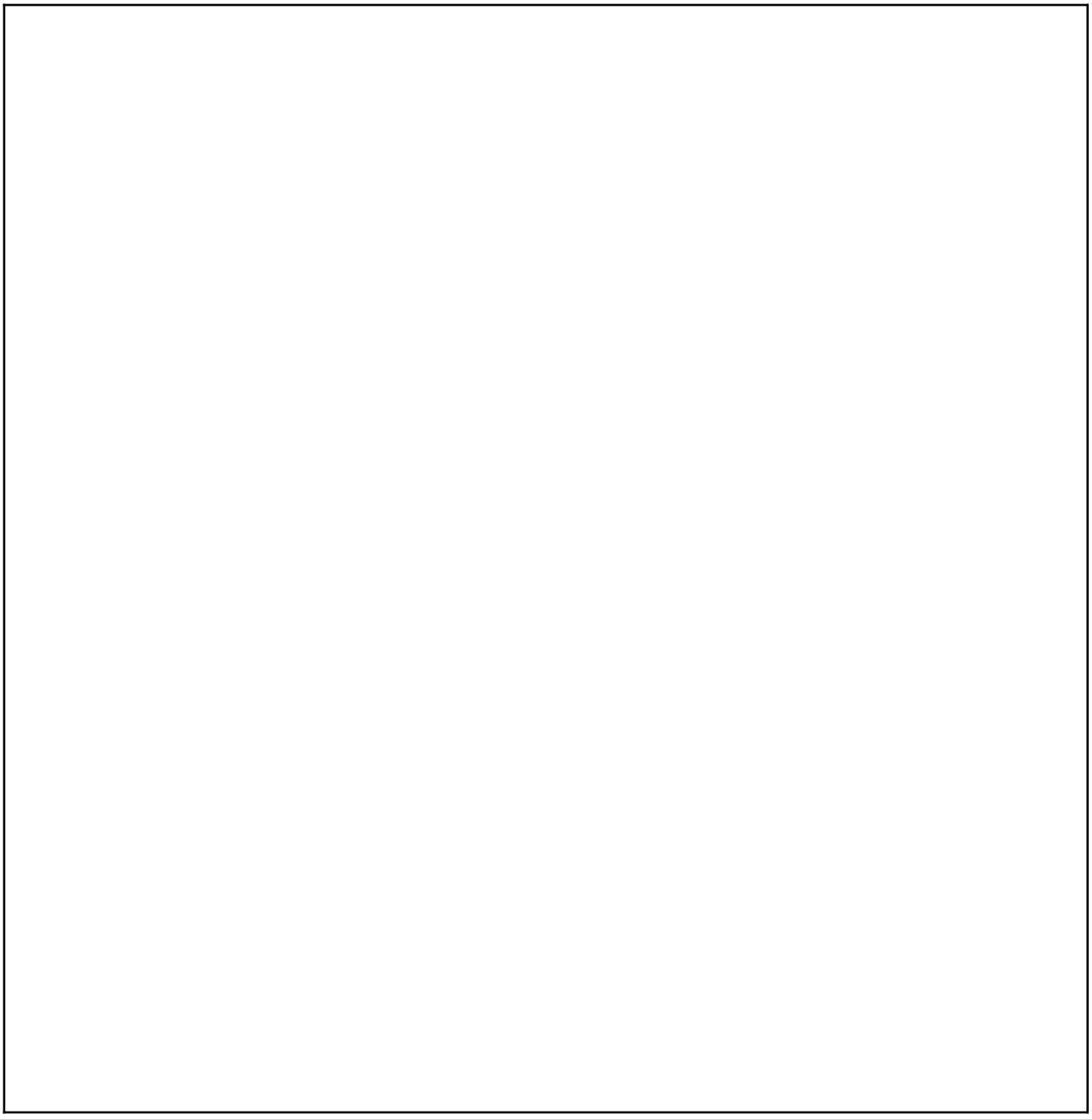
-Movement counting: Have your child reach low to the ground for a starting number (don’t always start with 1!) and reach up little by little until they get to the number you want them to end with. So if you start at 15 and want them to end at 25, they would be reaching down for 15, about half way for 20 and reaching up to the sky for 25!

Questions to Ask Your Child :

- How many bubbles can you count before they pop?
- How many red items can you find on our drive to grandmas?
- How many steps is it from here to the park?
- We need 7 bananas at the grocery store- can you count them for me?
- Can you count to 100 starting at 67? Can you count backwards to zero starting at 32?

Activity of the Week

Create a collection! These could be seashells you find at the beach, cool leaves from the park, your toy cars, or rocks-- anything you can think of! Draw a picture of what you collected. Count how many you found and write the number next to your picture.



1 Fill in the missing numbers on the calendar below.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4		6	7	8		10
11	12		14		16	17
18		20	21		23	
25		27		29		31

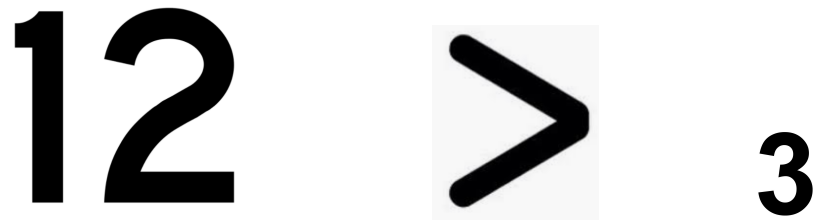
Numbers Before 50–100 Version A

Count back 1 or 2 and write the numbers that come before the number shown.

87	88	89
		54
		70
		91
		63
		82
		75
		67
		58
		96
		98
		59

Week 4

I can... tell which numbers are greater or less than another number.

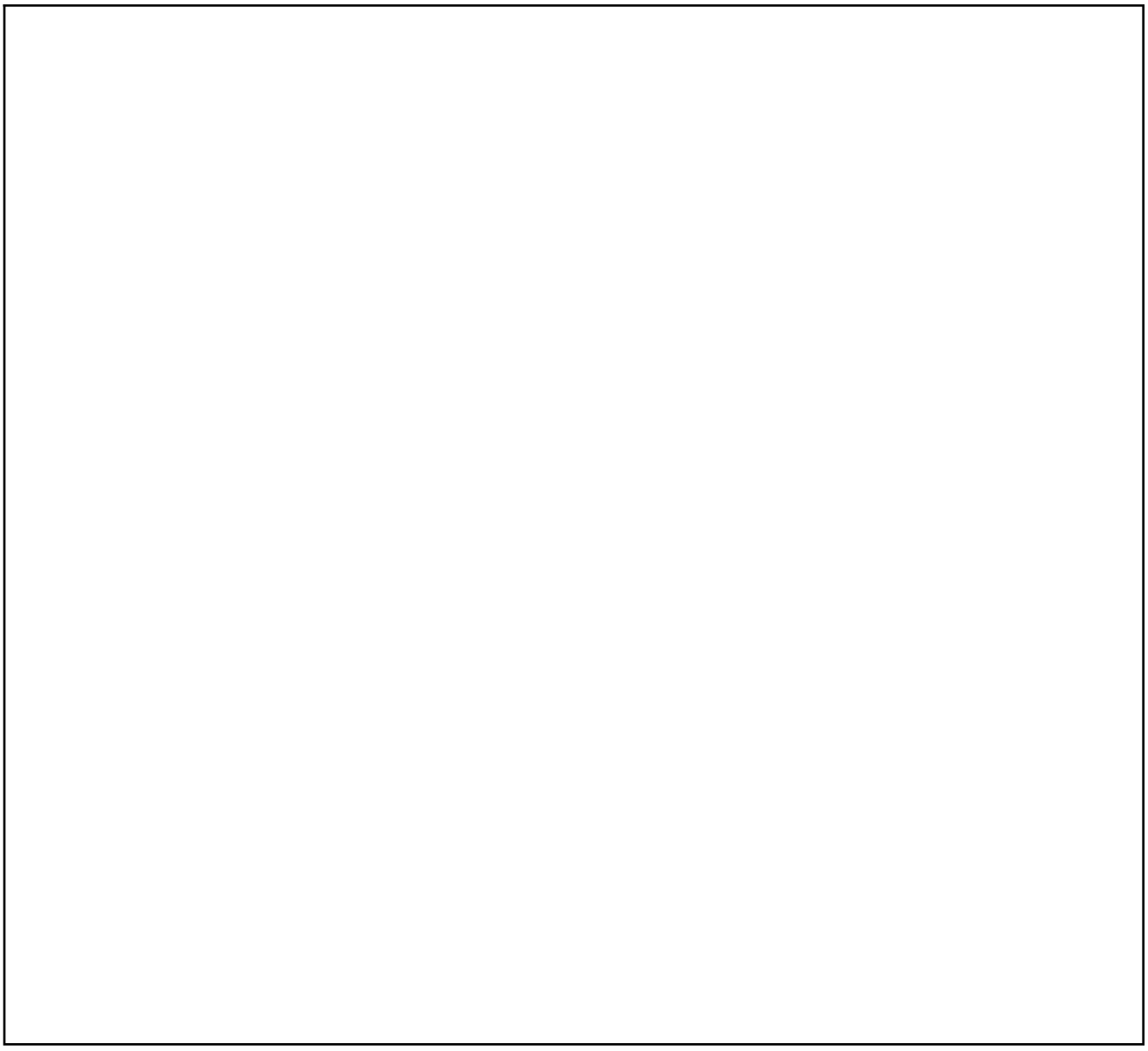


For Families

Understanding the math: In Kindergarten your child labeled quantities of objects as more or less. In later grades, they will need to be able to do this just using numbers (no pictures). If your child is struggling to identify which number is greater, encourage them to draw a picture or get out beads or beans or something for them to count out. This will deepen their understanding of numbers and eventually, they will no longer need the tool to help them.	
Resources: **-**Beans, beads, rocks, or any small object are great tools to help with comparisons! Keep a small container on hand this week.	**Questions to Ask Your Child :** -Which one has more (or less)? How do you know? -How many more is 7 than 5? -Whats a number that is bigger than ____? Smaller than ____?

Activity of the Week

Choose 5 favorite objects. Using your foot or blocks if you have some that are all the same size, “measure” how long each object is (your child might need help with this). Once you know how many blocks or feet long each object is, put them in order from biggest to smallest. Draw or write your biggest object and your smallest object.

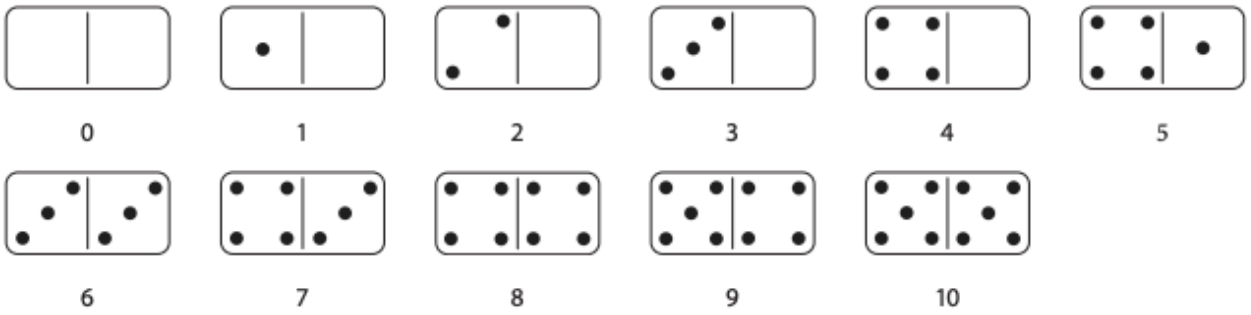


Circle the bigger number.

1)	7	☐	4	11)	3	☐	9
2)	3	☐	8	12)	3	☐	2
3)	4	☐	3	13)	5	☐	3
4)	2	☐	1	14)	9	☐	8
5)	6	☐	4	15)	7	☐	4
6)	8	☐	5	16)	5	☐	4
7)	5	☐	1	17)	6	☐	2
8)	3	☐	3	18)	7	☐	3
9)	3	☐	5	19)	3	☐	2
10)	4	☐	9	20)	2	☐	9

Put Them in Order

Use the numbers and dominoes to help with the problems below.

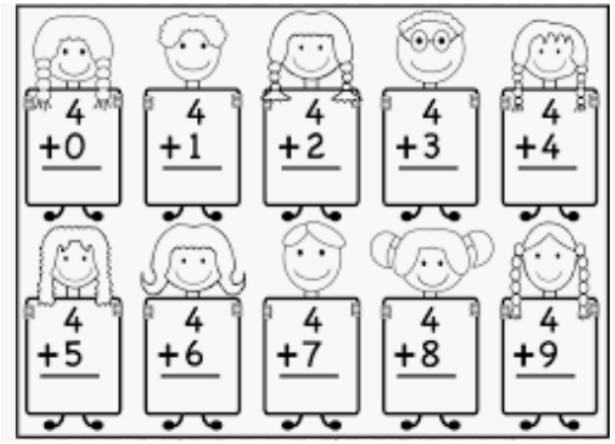


3 Trace the numbers. Then write them again in order from least to most.

a 5 6 4	4	5	6
b 8 6 7			
c 4 2 3			
d 3 1 2			
e 10 8 9			
f 7 9 8			

Week 5

I can... add numbers to 10.



For Families

Understanding the math: Students worked on many strategies for adding during kindergarten. One of the most helpful at this point is connecting counting to adding. Students can use a tool (like beads) or pictures to represent the problem then count the total. They may also begin to use what they know about five and ten to help them add. For example, 5+6 is the same as 5+5+1 or 10+1. They may also start to memorize double's facts (2+2=4, 3+3=6, etc.) At this point in their learning, it is great if they do have their facts to 10 memorized, but more importantly, they need to have strategies for figuring out how to solve addition problems.

Resources:

-Use the number rack app to help children add. Put one number at the top and the other at the bottom and count the total. https://apps.mathlearningcenter.org/number-rack/

-Encourage your child to count on from one number when adding. So 4 + 3, would be- Four, five, six, seven.

Questions to Ask Your Child :

-How did you know ___ + ___ was ___? Can you use what you know about making ten (or double's facts) to help you?

-How can you draw a picture to represent this problem?

-Can you build this problem with beads (or rocks, or whatever you have)?

-How many would I have if I got 3 more?

Activity of the Week

Write your own addition problem! Make up a story problem that has addition using the fill in the blanks below. Write it down (or have a family member help you!) and draw a picture of your problem. Don't forget to find the total!

I had _____. Then I got _____ more. How many do I have now? I have _____ now.

Note to Families

Help your child "count on" instead of counting from 1 every time. For example, if there are three dots on the first hand and two on the second, say "3, 4, 5!"

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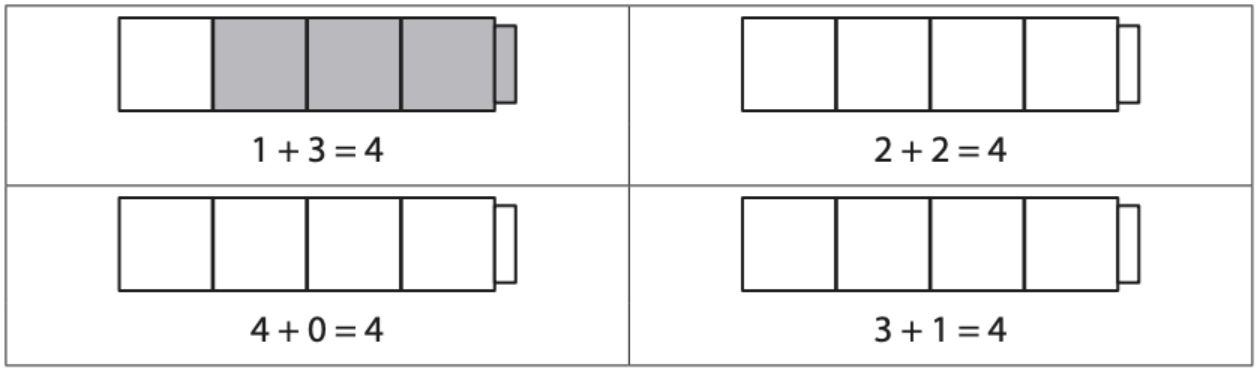
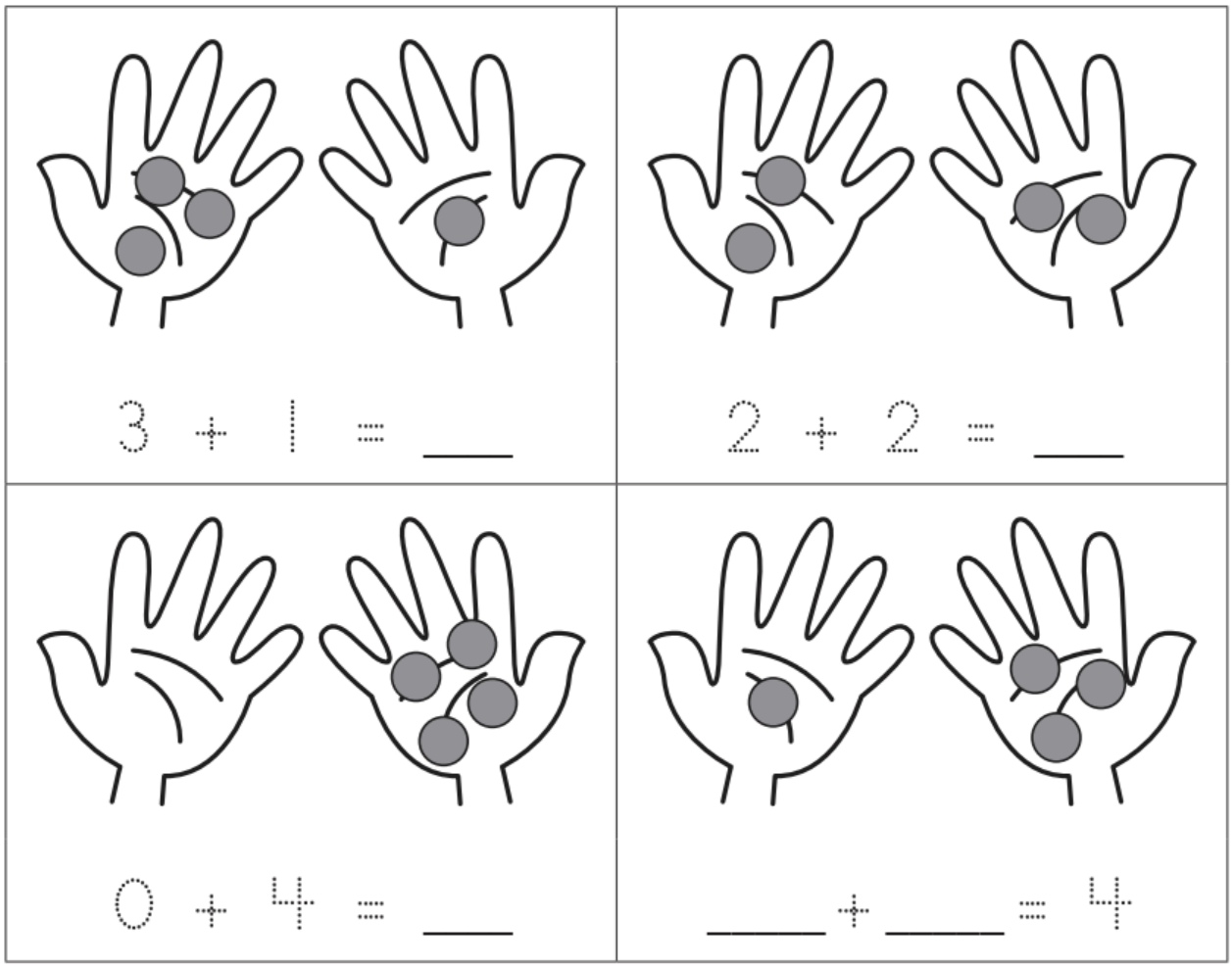
1 Color the cubes to match each equation.



2 Trace the numbers and solve the problems. Use the pictures to help.



(continued on next page)

Story Problems, Part 3 page 1 of 2

First there are 3 students working in their Student Books, then 2 more students come to join them. How many legs are there in all?

There are 3 chickens are in the barn. How many legs are there in all?

Week 6

I can... solve subtraction problems to 10.

For Families

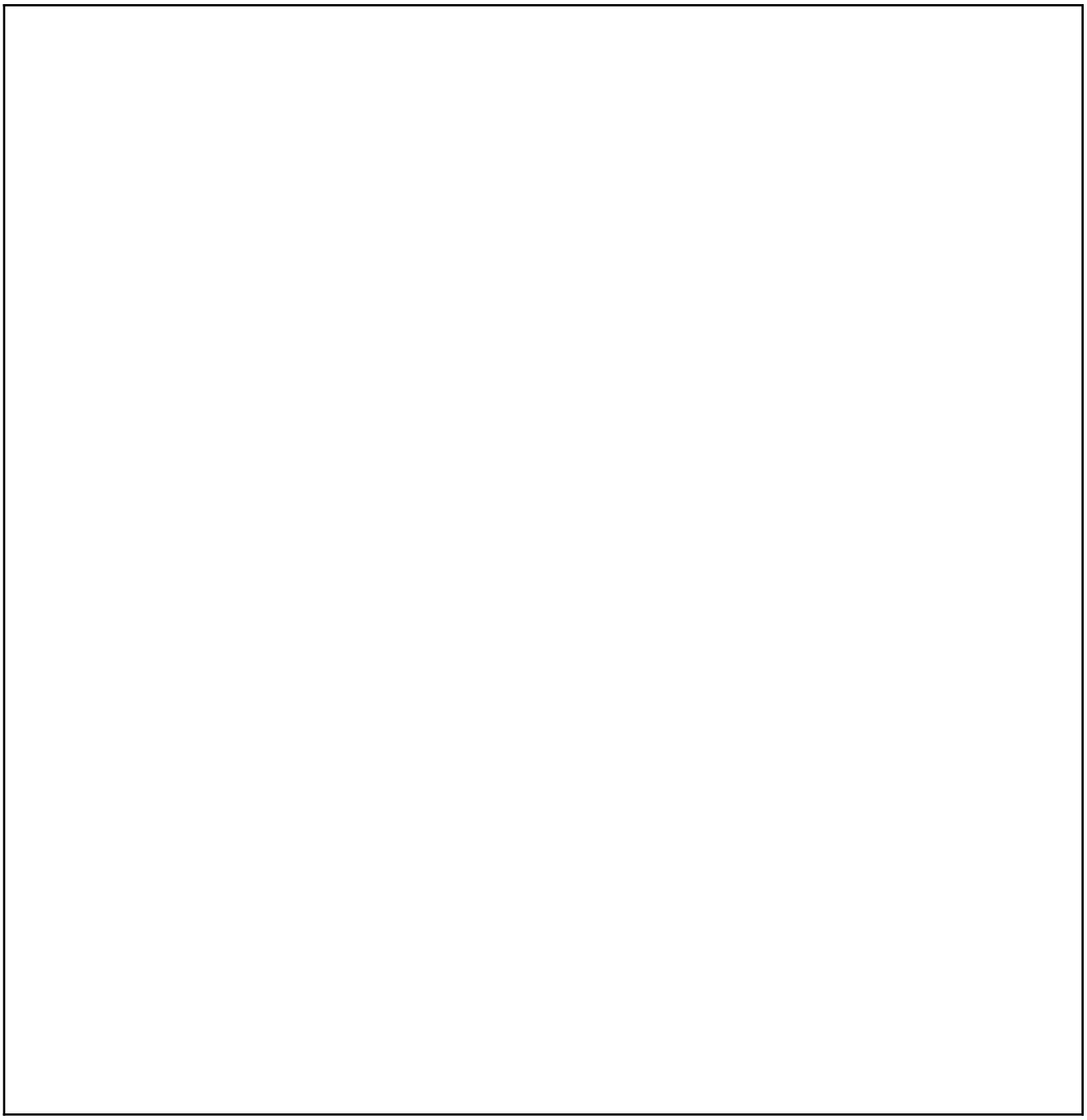
Understanding the math: If your child has a good understanding of addition and counting backwards, subtraction will be natural to them. Again, don't worry about memorizing subtraction facts at this point (although, it is great if your child naturally does this!), but rather focus on using the skills they already have. Subtraction is another great time to use the number rack (slide beads back to the right to take them away) or drawing a picture (have your child actually cross out the numbers they are taking away).

Resources:
-Build your starting number on the number rack, then slide beads back to the right to take them away.
https://apps.mathlearningcenter.org/number-rack/
-Using a physical tool like buttons or pasta to show subtraction can be very helpful for students. Try a few subtraction problems this week using a tool !

Questions to Ask Your Child :
-How did you know ___ - ___ was ____?
-Can you draw a picture to represent this problem?
-Can you count backwards to find the answer?

Activity of the Week

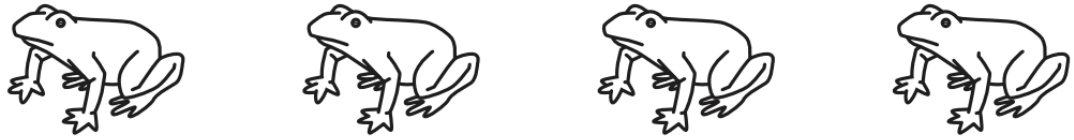
Write your own subtraction problem! Make up a story problem that has subtraction. Write it down (or have a family member help you!) and draw a picture of your problem. Don't forget to find the difference!



Frog Subtraction

1 Color the frogs. Trace the numbers or symbols. Write a subtraction sentence to match the picture.

Color 4 frogs green. Cross out 2 of them.



4 ..... 2 ::::: _____

Color 5 frogs red. Cross out 1 of them.

5 ..... 1 ::::: _____

Color 6 frogs brown. Cross out 3 of them.

_____ ..... _____ ::::: _____

2 Subtract.

2	3	4	5	5	6	6
– 1	– 2	– 2	– 3	– 4	– 1	– 2
___	___	___	___	___	___	___

1 Add (+) or subtract (–). Use counters or draw pictures if you wish.

5 + 3 = _____ _____ = 4 + 4 7 + 2 = _____

8 – 2 = _____ 10 – 5 = _____ _____ = 6 – 3

2 Read the story problems and find out how many.

a Katy poured 5 cups of water into the aquarium. The water wasn't high enough so she added 4 more cups.

How many cups of water in all? _____

b Aaron put 2 cups of water in his water bottle. Then he added 2 more cups.

How many cups of water in all? _____

c The pitcher of juice had 10 cups in it this morning. Marla's family drank 6 cups of juice.

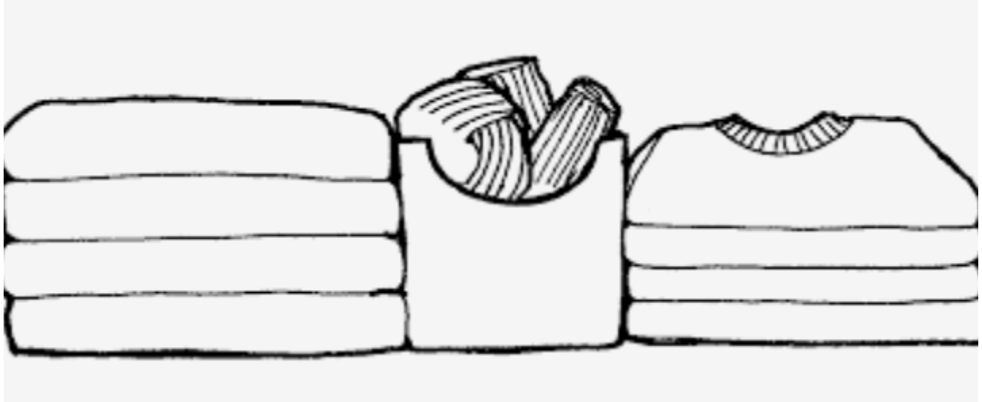
How many cups of juice are left? _____

d Darren put 6 cups of water in his dog's water bowl. The dog drank 4 cups of the water.

How many cups of water are left? _____

Week 7

I can... sort objects into categories based on their attributes.

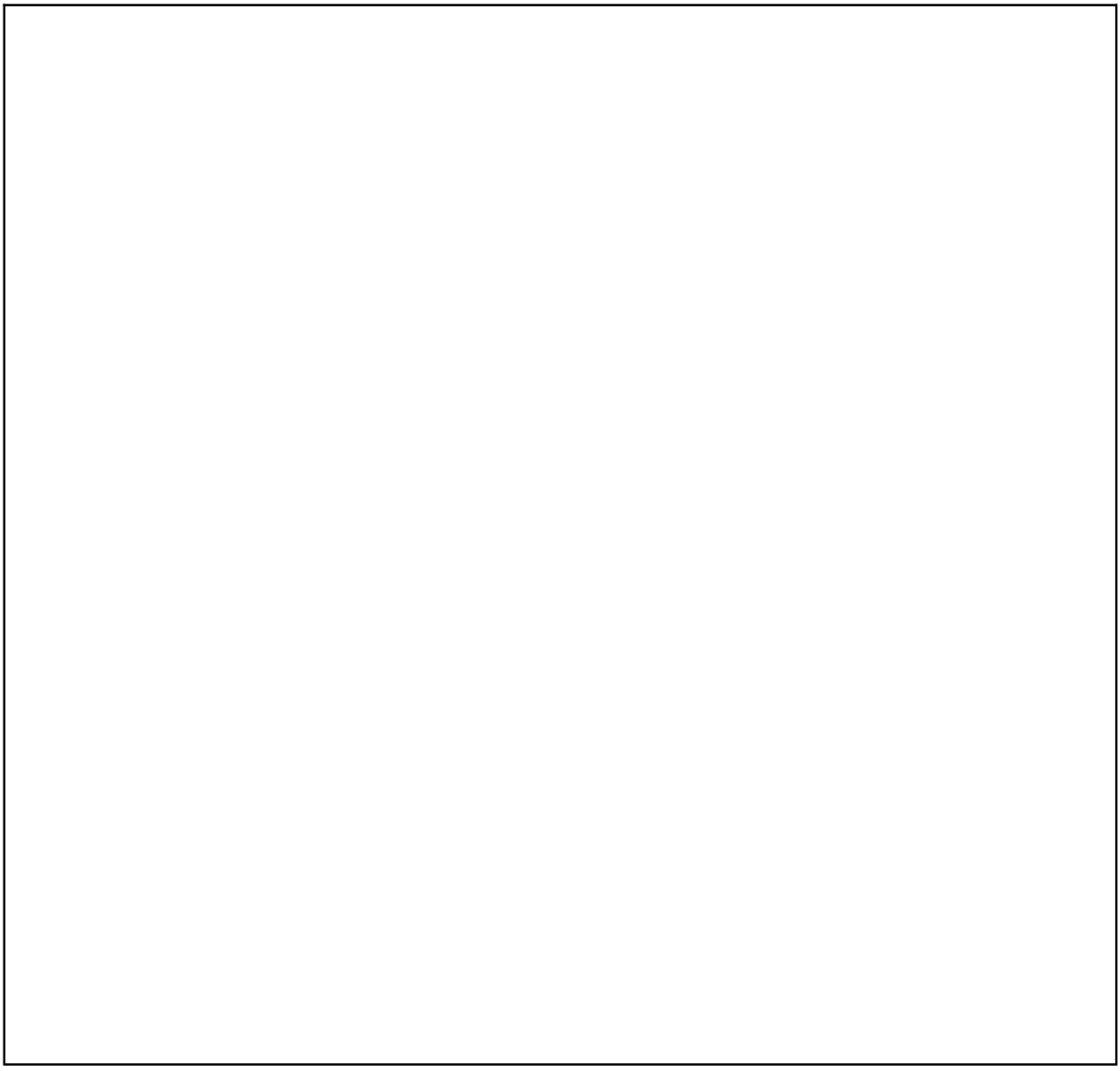


For Families

Understanding the math: We sort objects all the time- our laundry, our trash and recycling, our silverware! It helps keep us organized and orderly. Being able to analyze objects and put them into categories based on attributes (or characteristics) is actually an important math skill. Students will eventually get into algebra and need to put all of their Xs and Ys together. This foundation in the early grades will help them be successful in future math!	
Tips: -Sorting is an excellent activity to include your child in. Have them put away silverware in categories, sort trash from recycling and maybe even have them clean their room using what they learned! Along the way, ask questions about their strategies for sorting and help them see there are many ways to sort objects!	**Questions to Ask Your Child :** -What categories did you choose to sort? Why did you choose those? -Can you sort them a different way? -What names could you give your categories? (IE, all of these a green, all of these are small, etc.)

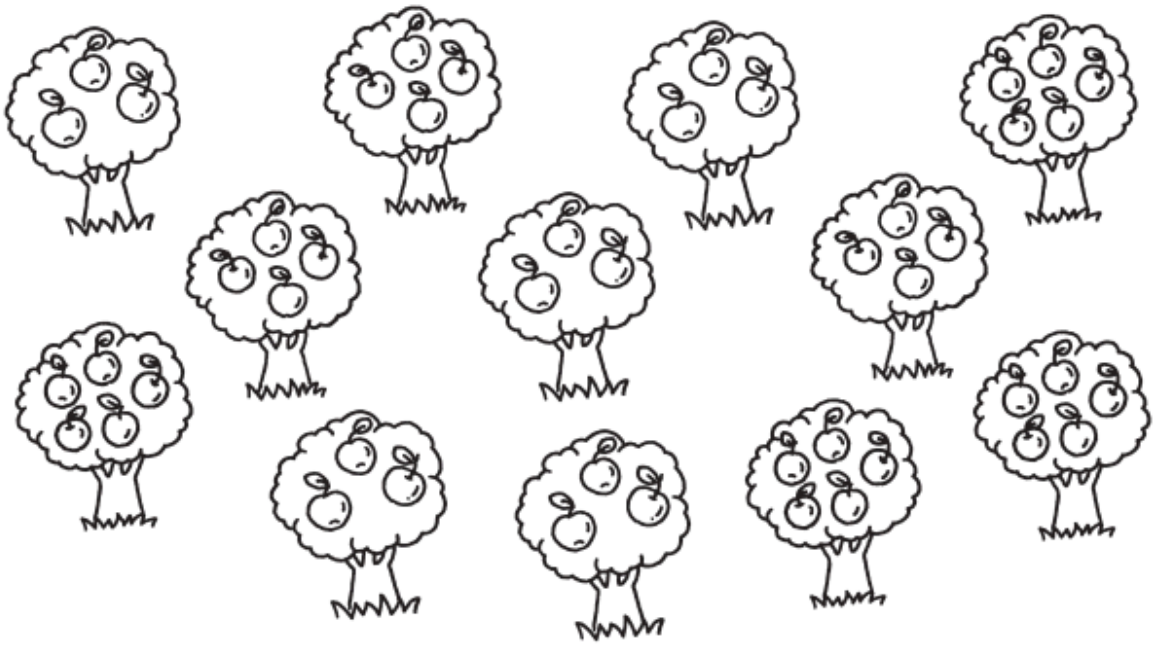
Activity of the Week

Help with the laundry! Ask your families how they sort the clothes before they wash them and after. Do they sort by type of clothing? Who it belongs to? By color? Draw a picture of one way you sorted and add labels to show the name of that category!



Sorting the trees

Count how many apples are on each tree.



How many trees have...

3 apples?	
4 apples?	
5 apples?	

Draw 1 more tree for each set.

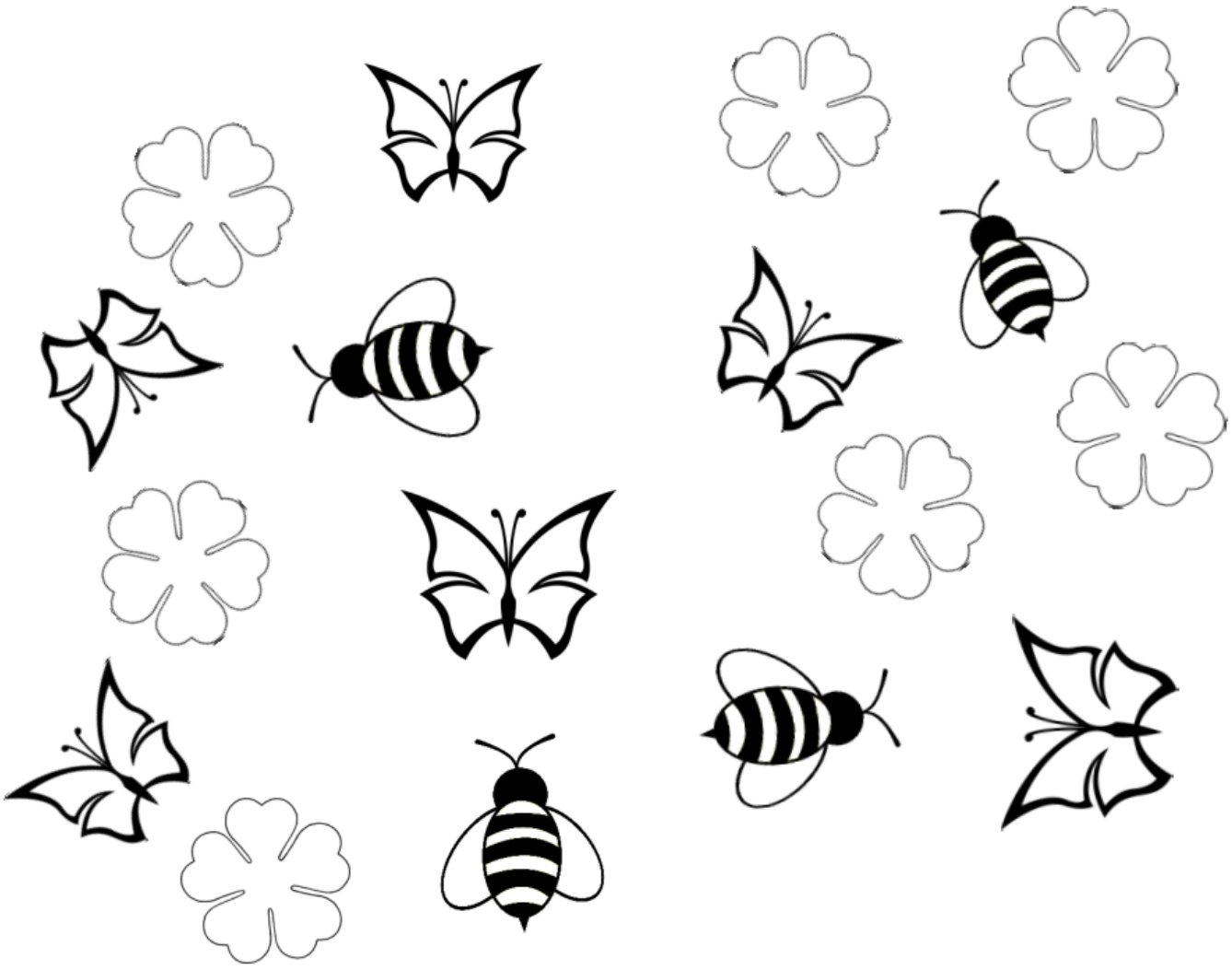
Now how many trees have...

3 apples?	
4 apples?	
5 apples?	

Sort and count

Kindergarten Sorting Worksheet

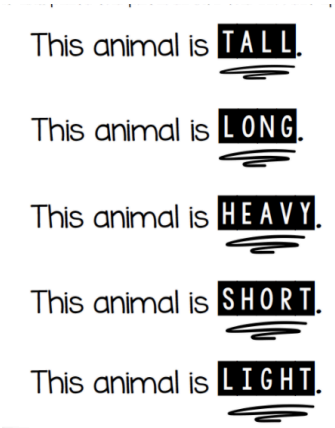
Color each insect or flower a different color and count how many of each there are.



Butterfly	Bee	Flower

Week 8

I can... describe items using measuring words.



For Families

Understanding the math: Measurement attributes are words we use to describe the world around us. Some examples of these words include: heavy/light, short/tall, small/big, long/short, holds more/holds less. Children need practice and experience with these words! Describe what you are holding or seeing often- this will help your child really understand the meaning of each one. Children should also begin to understand that we can measure things, however, it is not necessary for them to understand units of measurement (like inches or pounds) yet.

Resources:

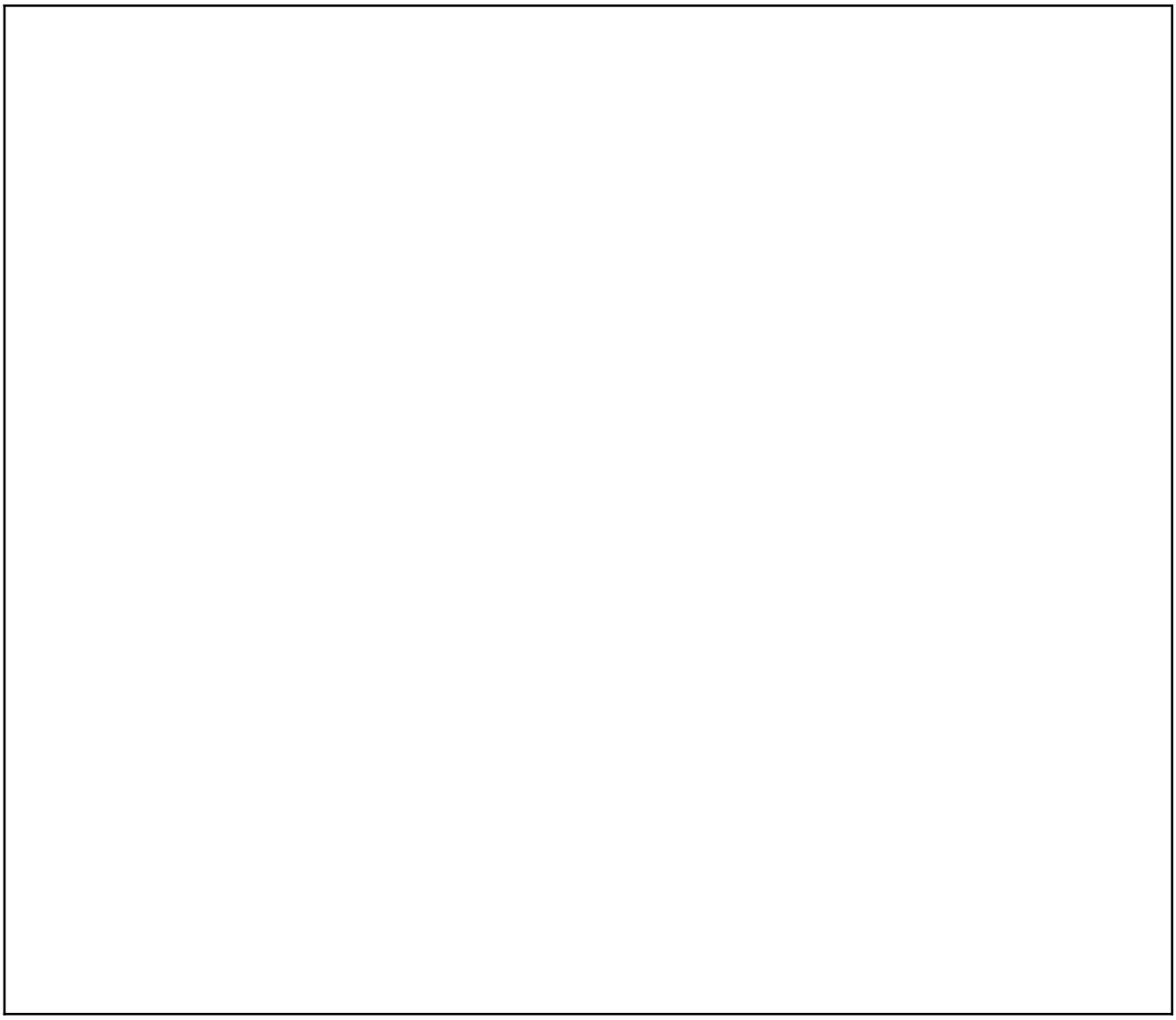
-Holding two objects in your hand? Tell your child which one is heavier than the other. Then have your child hold them to feel. You can do this with length (line them up) or any other measurement.

Questions to Ask Your Child :

- Which one is heavier (or taller or lighter or smaller...)?
- Can you find the lightest object in our house (or any other measurement)?
- How did you know it was shorter (or any other word)?

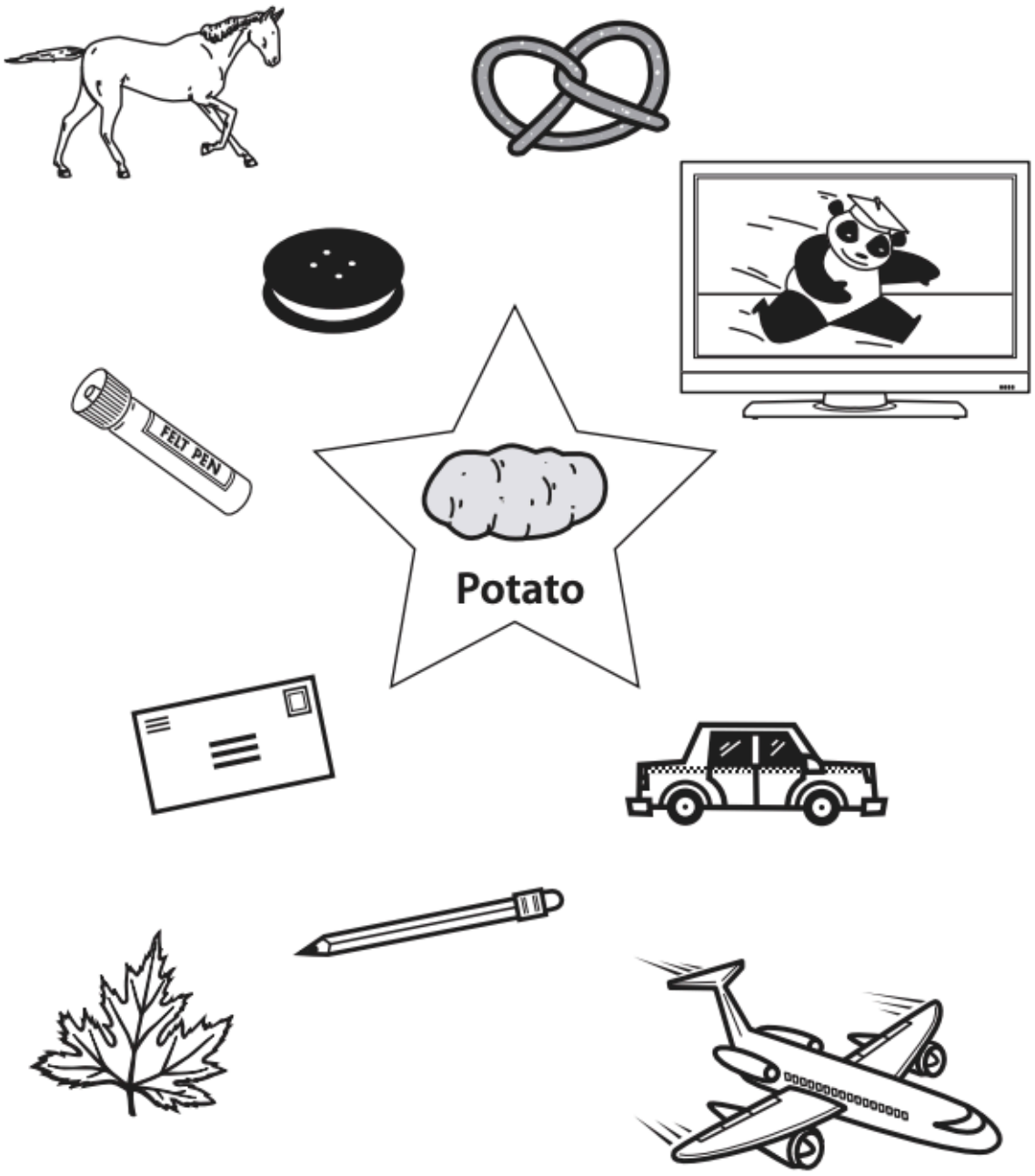
Activity of the Week

Collect a few different sized objects that hold water (cups, bowls, buckets, etc). Outside on a hot day or in the bathtub, fill each up and try to decide which one holds the most water. Make a prediction and then explore with them- can you dump all of the water from the cup into the bucket? Can you dump all the water from the bucket into the cup? Draw a picture of what you did.



How Many in a Pound? page 3 of 3

Make a circle around the objects that would be *heavier* than a potato. Make a box around the ones that would be *lighter* than a potato.

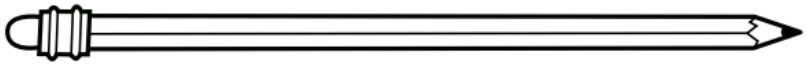


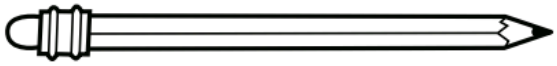
How many of the objects are *heavier* than a potato? _____

How many of the objects are *lighter* than a potato? _____

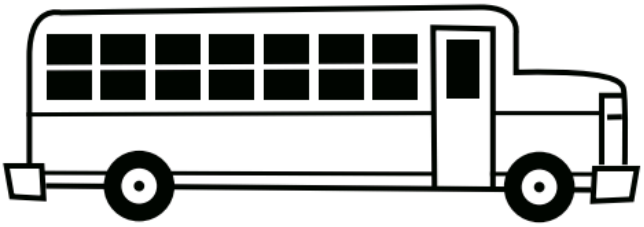
Longer & Shorter, More & Less page 1 of 2

1 Draw a red X on the longer pencil. Color the shorter pencil green.

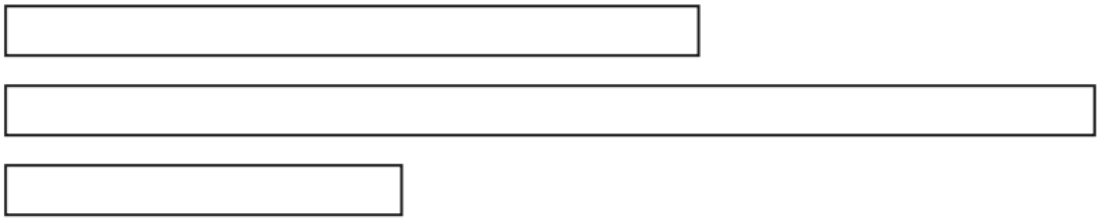




2 Color the longer vehicle yellow. Draw a circle around the shorter vehicle.

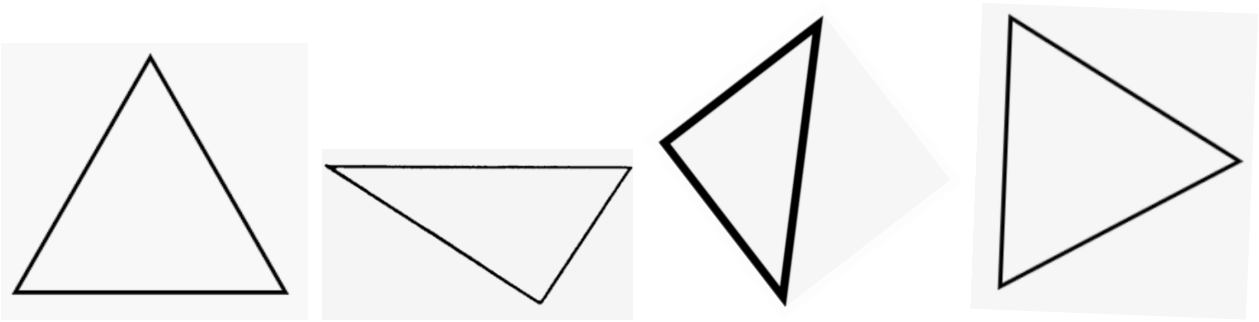


3 Color the longest ribbon blue. Color the shortest ribbon red.



Week 9

I can... I can identify, draw, and describe 2D shapes.



For Families

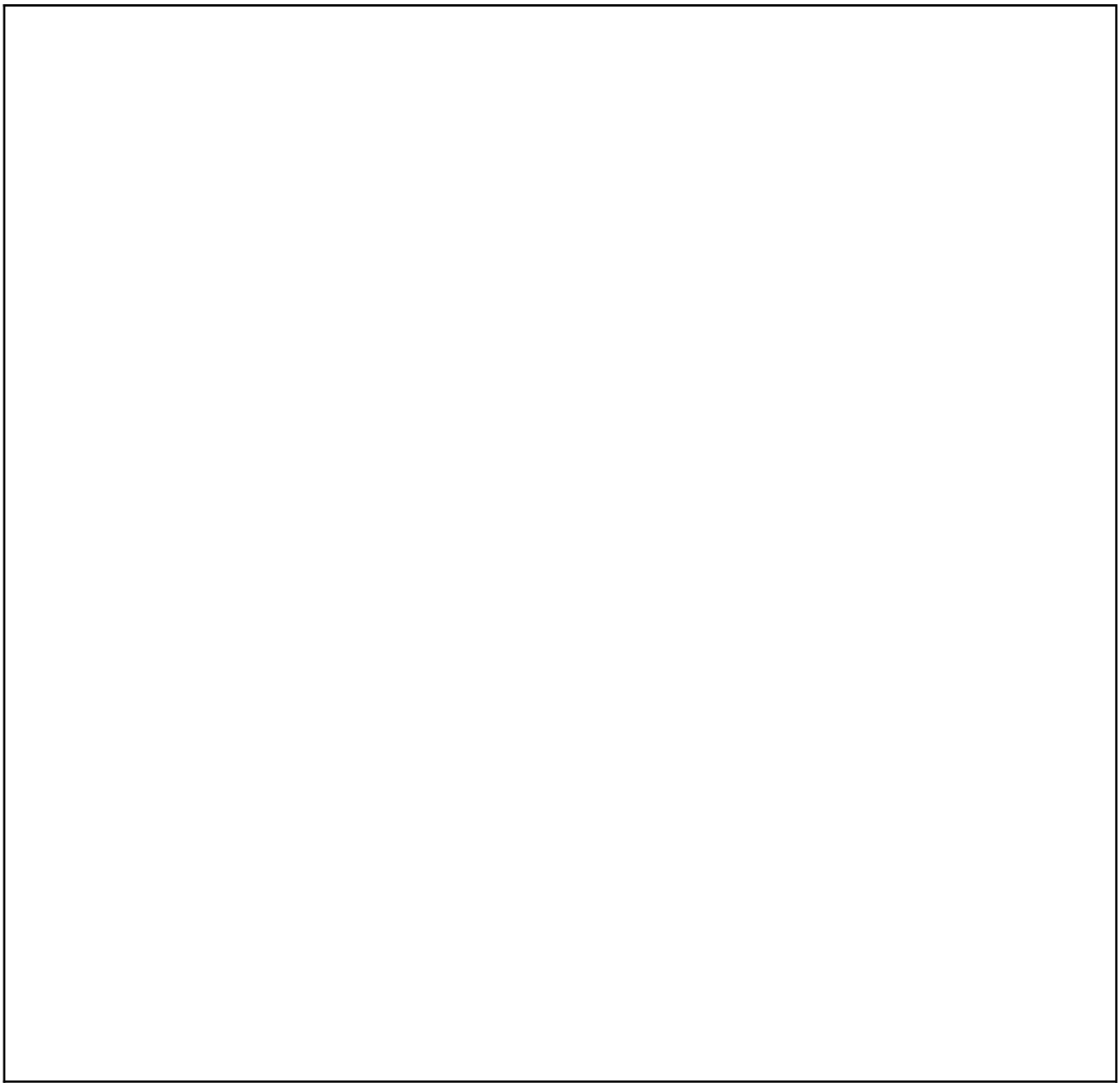
Understanding the math: Your child got lots of time to practice 2D shapes in their kindergarten classroom.. They should be able to draw and describe shapes by saying the number of sides and corners. They should also be able to name 2D shapes. One thing about shapes to be aware of is it is very common for children to not be able to identify shapes that don't look like the "regular" one. For example, above your child will probably immediately be able to identify the first shape as a triangle, however, they may not be able to identify the rest. To help them with this concept, show your child some object (like a shoe). Turn it all upside down and ask if its still a shoe. Explain that triangles are the same! With practice, your child will be able to identify all of the shapes as triangles.

Resources:
-Try creating different pictures and naming the shapes on: https://apps.mathlearningcenter.org/pattern-shapes/
-Shapes are everywhere! Point them out wherever you go this week and have your child search for shapes throughout your day!

Questions to Ask Your Child :
-What shape is this? How do you know?
-How many sides does it have? How many vertices?

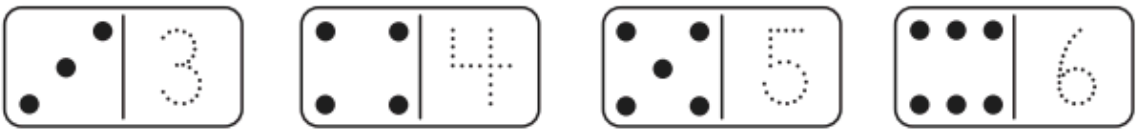
Activity of the Week

Draw a picture that has: 3 triangles, 2 squares, 1 rectangle, 4 circles, and a hexagon. Your picture can be of one of your summer adventures or anything else you want!

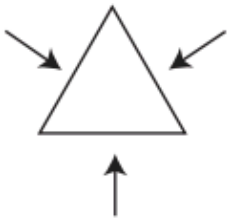
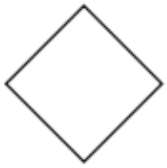
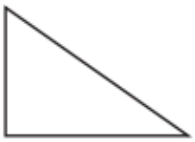
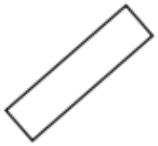
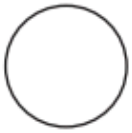


How Many Sides?

1 Trace the numbers.

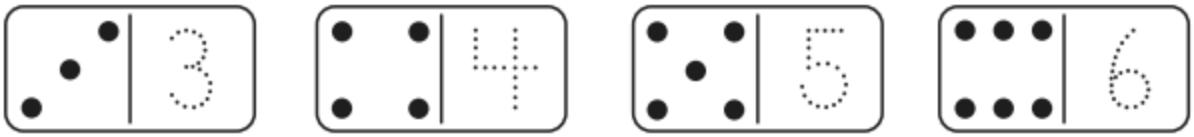


2 Count and record the number of *sides* on each shape. You can add an arrow on each side if it helps.

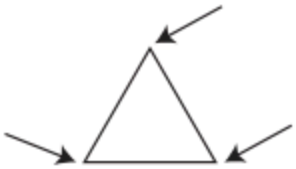
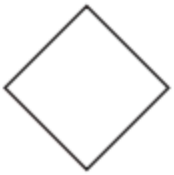
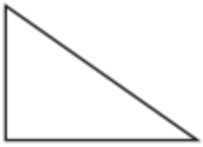
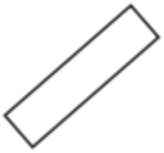
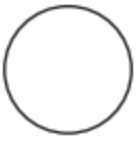
triangle	How many sides?	rhombus	How many sides?
	3		
rectangle	**How many sides?**	**square**	**How many sides?**
			
triangle	**How many sides?**	**rectangle**	**How many sides?**
			
square	**How many sides?**	**hexagon**	**How many sides?**
trapezoid	**How many sides?**	**CHALLENGE circle**	**How many sides?**
			

(continued on next page)

3 Trace the numbers.

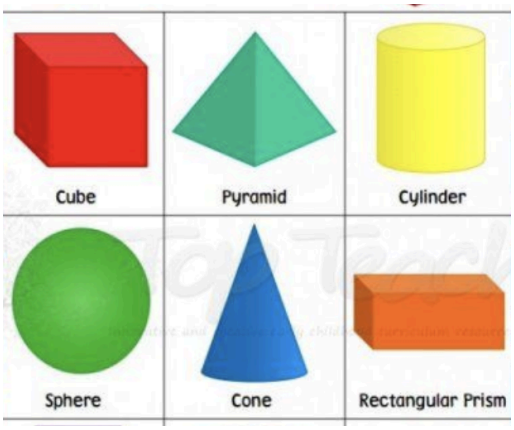


4 Count and record the number of *corners* on each shape. You can add an arrow on each corner if it helps.

triangle	How many corners?	rhombus	How many corners?
	3		
rectangle	**How many corners?**	**square**	**How many corners?**
			
triangle	**How many corners?**	**rectangle**	**How many corners?**
			
square	**How many corners?**	**hexagon**	**How many corners?**
trapezoid	**How many corners?**	**CHALLENGE circle**	**How many corners?**
			

Week 10

I can... I can identify, draw, and describe 3D shapes.



For Families

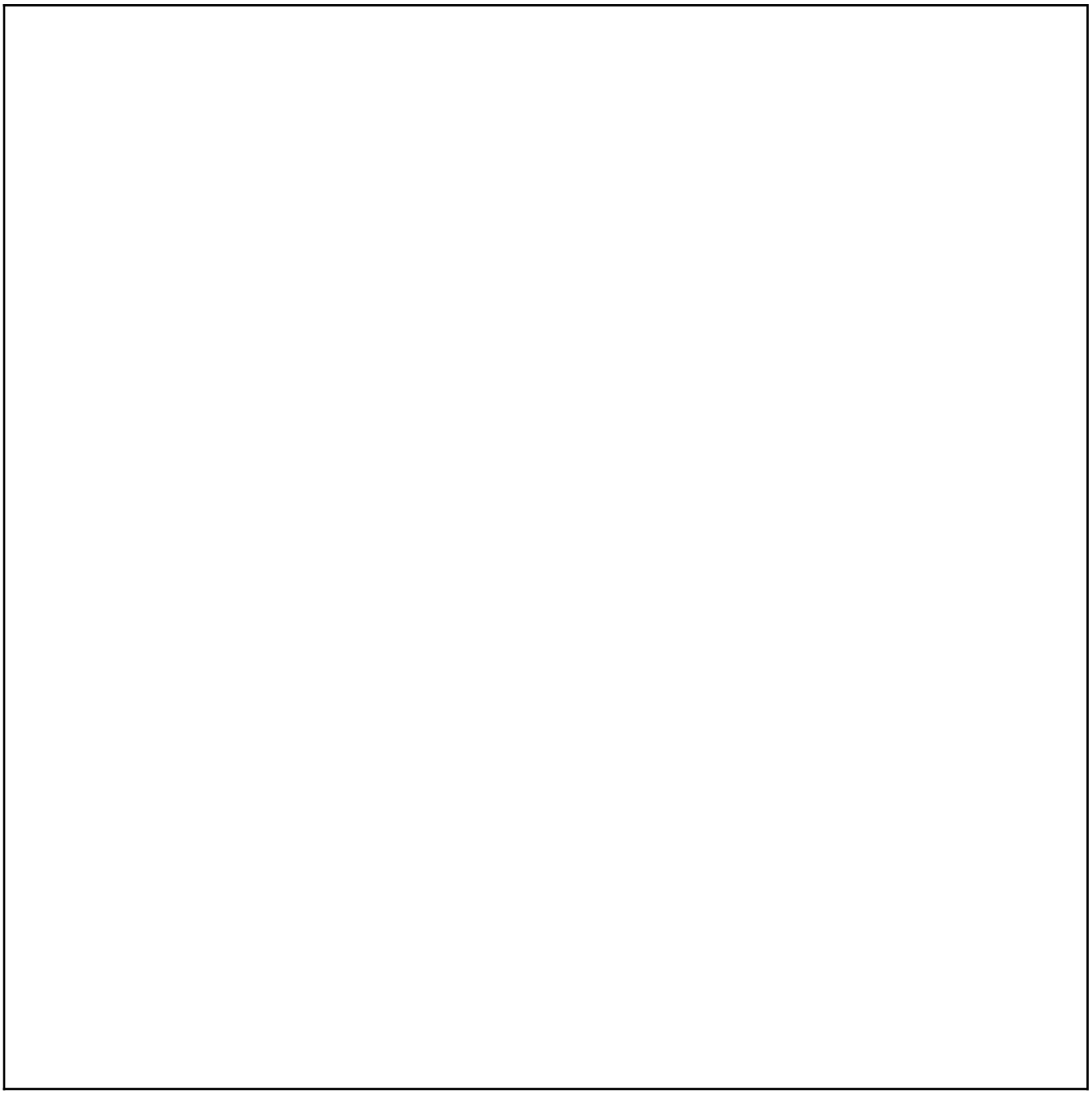
Understanding the math: 3D shapes tend to be a little harder for students to name than 2D shapes. It's a common mistake for a child to call 3D shapes by their 2D names. So a sphere might be a circle and a pyramid, a triangle. Help them notice the differences between the two! Also note that in kindergarten, children learned to name and describe 3D shapes (not draw them). They can describe them by name sides (or faces), edges, and corners.

Resources:
-3D shapes are everywhere! Look for them and talk about them throughout your day.
-Building shapes with clay or play-doh is another great hands on activity to do with your child. Have them describe their shape as they build it.

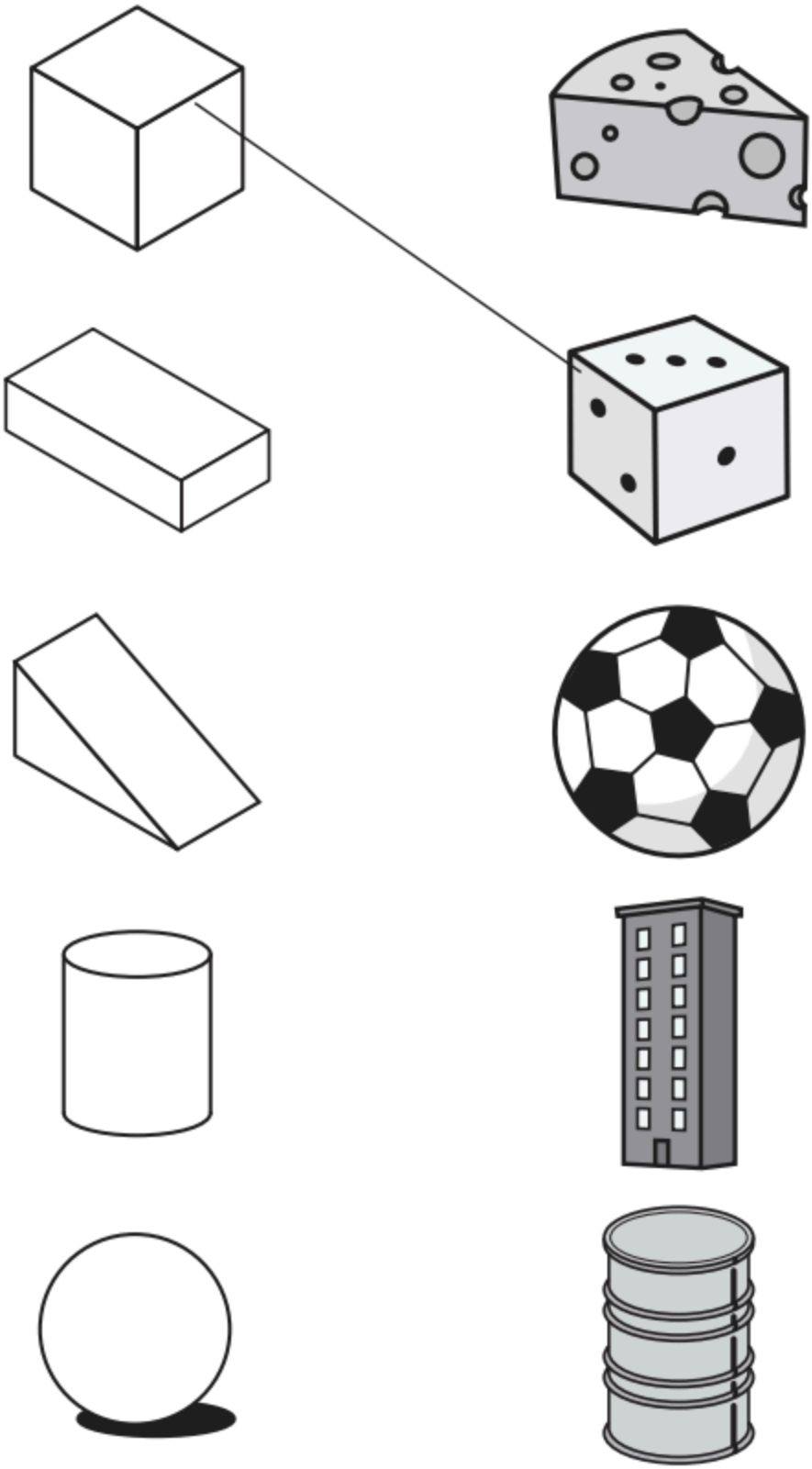
Questions to Ask Your Child :
-How do you know it's a cube and not a sphere?
-How many faces or edges or vertices does that shape have?
-What 2D shapes make up the faces of this 3D shape?

Activity of the Week

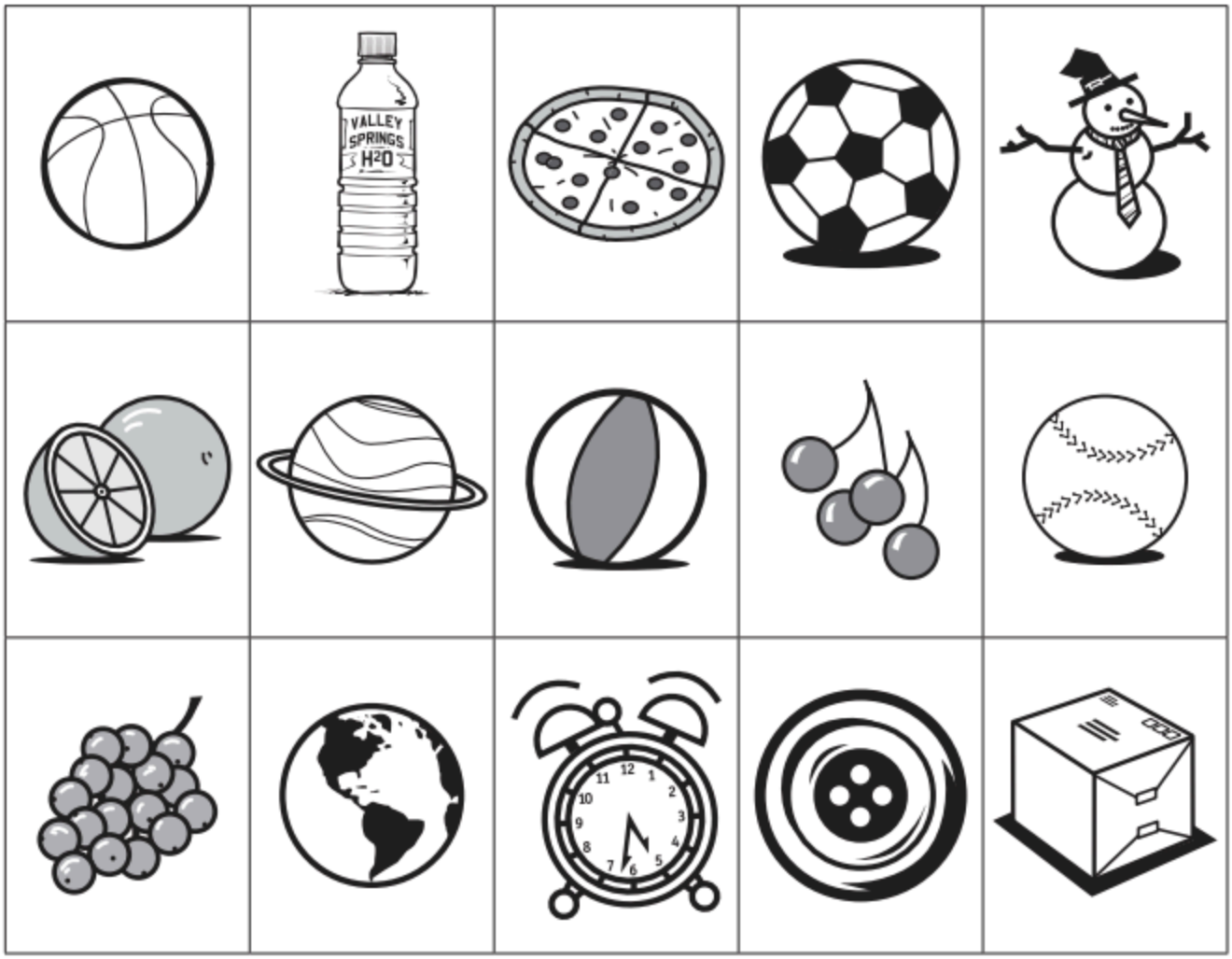
Go on a 3D shape hunt in your house or neighborhood! Look for: spheres, cubes, cylinders, pyramids, and rectangular prisms. Draw 2 items you found, Label them with their shape name.



Match the shapes.



4 Use crayons or colored pencils to color in just the spheres.



5 How many pictures of spheres did you color in? _____

6 **CHALLENGE** Which pictures could you combine to show 20 spheres?