

## Grade 1—Home Math Activities

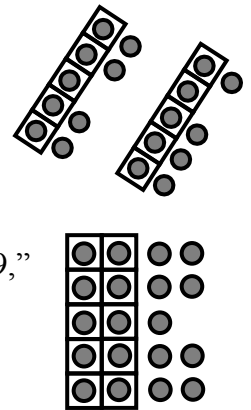
Below are math activities that you can do at home with your child.

### Number Activities using Teen Number Sort Cards—Set 2

**Prep:** Print, cut, and shuffle the cards well.

#### Activity 1—Name that number

- Shuffle the cards well.
- Flash the card quickly.
- Have your child name the teen number they see.
- For cards showing quantities, ask your child to describe how the dots are arranged. (For the first picture on the right your child may say, “Double 9,” “Double 5 and double 4.” For the second image your child may say, “10 and 9,” “2 tens with 1 missing.”)
- Flash the card again quickly.
- Ask your child if he or she changed his or her mind.
- Show the card so your child can check.
- Repeat for the remaining cards.



#### Activity 2—Write that numeral

- Remove the numeral cards (14, 15, 17, 18 19)
- Shuffle the remaining cards well.
- Flash the card quickly.
- Have your child write the numeral that goes with the quantity they see (For example, 14, 15, 17, 18, 19).
- Flash the card again quickly.
- Ask your child if he or she changed his or her mind.
- Show the card so your child can check.
- Repeat for the remaining cards.

#### Activity 3—How many more than 10?

- Shuffle the cards well.
- Flash the card quickly.
- Ask your child to name how many more than 10 is the number on the card.
- Ask your child to describe how they figured out the answer.
- Flash the card again quickly.
- Ask your child if he or she changed his or her mind.
- Show the card so your child can check.
- Repeat for the remaining cards.

#### **Activity 4—Quantity Sort**

- Shuffle the cards well.
- Have your child sort the cards in some way.
- Ask your child to name the groups (For example, your child may sort the cards by teen numbers: 14, 15, 17, 18, 19. They may sort by cards with 10-frames, cards with domino dots, cards with number words, etc.)
- After your child has sorted the cards in one way, ask them to sort in a different way.

#### **Activity 5—Who has more?**

- Shuffle the cards well.
- Deal the cards so that each player has the same number of cards.
- Each player places their cards in a stack, face down.
- Each player turns over the top card on his or her stack.
- The player with the greater number states how they know it is greater. He or she then takes the cards and places on the bottom of his or her stack.
- See who can capture all of the cards.

#### **Activity 6—Who has fewer? Who has less?**

- Shuffle the cards well.
- Deal the cards so that each player has the same number of cards.
- Each player places their cards in a stack (upside-down).
- Each player turns over the top card on his or her stack.
- The player with the fewer number of dots states how they know it is fewer. He or she then takes the cards and places on the bottom of his or her stack.
- See who can capture all of the cards.

## **Other Number Activities**

### **Activity 7—Quantity hunt**

- Have your child look for things that there are more than 10 of around your home and in the neighborhood. For example, books, clothes, glasses, leaves, pebbles, squirrels, birds.
- Have your child draw pictures of what he or she finds.

### **Activity 8—Place Value Investigations**

**Materials:** pennies or another small item such as dried beans, buttons, popcorn, or books

- If you have a penny jar, have your child make stacks of 10 pennies. Ask, your child to predict how many stacks of 10 he or she will be able to make.
- Have your child count by 10s as he or she points to each stack. Then have your child count the “extras.” (For example, if there are 7 stacks of 10 pennies and 4 extra pennies your child would count 10, 20, 30, 40, 50, 60, 70, 71, 72, 73, 74. He or she may also count to 70 and just say 74. That’s okay too.)
- Remove a stack of 10 pennies and ask your child to name the number that is 10 fewer. (For example, if the starting number is 74, when you remove 10 the new number is 64).
- Repeat by removing another 10 and ask you child to name the number that is 10 fewer.
- Repeat until you only have the “extras.” (In our example it would be 4).
- Go the opposite direction by adding a stack of 10. Ask your child to name the number that is 10 more (For our example it would be 14).

**Note:** This activity can be done with books, dried beans, buttons, popcorn.

## **Addition Strategy Games**

### **Bridge to 10 strategy using the *Bridge to 10 Concentration Cards***

The bridge to 10 strategy is a powerful addition strategy for your child to know. In grade 1 we want children to know that another way to think of  $9 + 4$  is as  $10 + 3$  or  $8 + 6$  as  $10 + 4$ . In grade 2 your child will use this strategy to solve problems such as  $38 + 6$  knowing that it is the same as  $40 + 4$ . They can link  $38 + 16$  to  $40 + 14$ . When they reach grade 5 they will use the strategy to solve problems such as  $3.8 + 1.6$  linking the problem to  $4.0 + 1.4$ . We call it the Bridge to 10 strategy in grade 1. In later grades your child will learn it is the Associative Property.

**Prep:** Print, cut, and shuffle the cards well.

#### **Activity 1—Quantity Match**

- Shuffle the cards well.
- Place cards face up in 4 rows with 6 cards in each row.
- Take turns finding matches.
- Each player must share how he or she knows it is a match before taking the cards.

#### **Activity 2—Quantity Concentration**

- Shuffle the cards well.
- Place cards face down in 4 rows with 6 cards in each row.
- Take turns turning over 2 cards and placing face up in the exact same spaces.
- If the cards match, the player must share how he or she knows it is a match before taking the cards.
- If the cards do not match, the player must share how he or she knows the cards do not match before turning them back over.
- See who can find the most matches.

#### **Activity 3—Who has more?**

- Shuffle the cards well.
- Deal the cards so that each player has the same number of cards.
- Each player places their cards in a stack, face down.
- Each player turns over the top card on his or her stack.
- The player with the greater number states how they know it is greater. He or she then takes the cards and places on the bottom of his or her stack.
- See who can capture all of the cards.

#### Activity 4—Who has fewer?

- Shuffle the cards well.
- Deal the cards so that each player has the same number of cards.
- Each player places their cards in a stack (upside-down).
- Each player turns over the top card on his or her stack.
- The player with the fewer number of dots states how they know it is fewer. He or she then takes the cards and places on the bottom of his or her stack.
- See who can capture all of the cards.

### Doubling strategies using spinners and the *Double Match* games

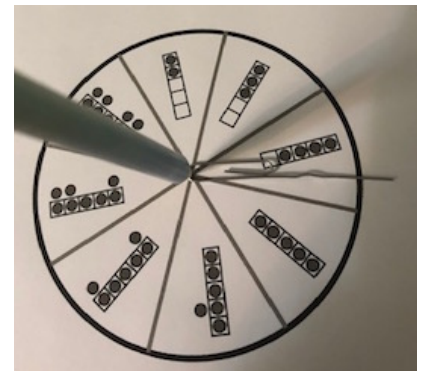
Doubles and near doubles (doubles plus 1, doubles minus 1, doubles plus 2, doubles minus 2) are also important addition strategies for your child to know. In grade 1 your child will double the numbers 1 to 9 (e.g., double 8 is 16, double 6 is 12). He or she may also double multiples of 10 (e.g., double 40 is 80, double 30 is 60). It is also important for your child to name the double (For example, when shown  $7 + 7$  your child came name it as double 7). A near double is a problem such as  $7 + 8$ . It is important for your child to know that this is double 7 and 1 more or 1 fewer than double 8. As your child moves up through the grades they will use these strategies to quickly solve problems such as  $199 + 199$  (or  $2 \times 199$ ). They think of this problem as double 200 minus 2.  $56 + 56$  (or  $2 \times 56$ ) is double 50 plus double 6 or 112.

**Materials:** Spinner page, paper clip, about 12 game pieces per player (these can be different types of beans or different colors of paper cut into small squares), blank paper, pencil or crayon.

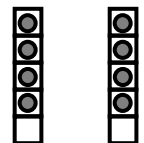
#### Activity 1—Draw the double

**Prep:** Print the spinner page. Partially unfold a paperclip to use as the spinner. Gather a pen or pencil and a sheet of paper.

- Have your child fold a sheet of paper into 4 equal sections.
- Have your child spin the 5-frame spinner.
- In the first section of the paper, have your child draw what is on the spinner section where the paper clip is pointing.



- Have your child draw the same image again to show the double.
- Have your child spin the spinner a second time and draw the related double in the next section.
- Repeat by having your child spin the spinner and draw the related double in the next section on your paper.
- Have students complete the activity by spinning their spinner and drawing the related double a total of 8 times (4 drawings on the front of the paper and 4 drawings on the back).



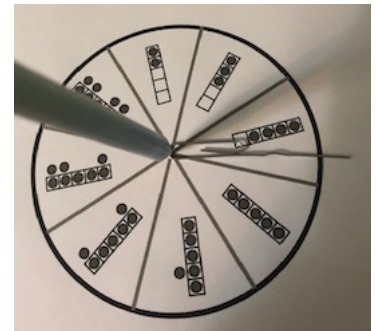
Repeat this activity on a different day using the domino dot spinner.

## Activity 2—Doubles Match Game 1

**Prep:** Print the Doubles Match Game 1 gameboard. Gather about 12 game pieces per player (these can be different types of beans or different colors of paper cut into small squares). Partially unfold a paperclip to use as the spinner. Gather or print the spinner page from Activity 1.

To play:

- Players take turns spinning the 5-frame spinner.
- Players claim a spot by naming the double (double 4) and placing a game piece on the associated double on the gameboard (Note: The double can look differently than the spinner arrangement.) There can only be one game piece per spot.



Doubles Match Game 1

		Free Double		

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- The goal is to be the first to claim 3 spaces in a row—horizontally, vertically, or diagonally.
- When a player wins, clear the board and play again.

Play this game on a different day using the domino spinner.

## Activity 3—Doubles Match Game 2

**Prep:** Print the Doubles Match Game 2 gameboard. Gather about 12 game pieces per player (these can be different types of beans or different colors of paper cut into small squares). Partially unfold a paperclip to use as the spinner. Gather or print the spinner page from Activity 1.

To play:

- Players take turns spinning the 5-frame spinner.
- Players claim a spot by naming the double, the answer (“double 4 is 8”) and placing a game piece on the associated double on the gameboard. There can only be one game piece per spot.
- The goal is to be the first to claim 3 spaces in a row—horizontally, vertically, or diagonally.
- When a player wins, clear the board and play again.

Doubles Match Game 2

2 + 2	4 + 4	6 + 6	9 + 9	8 + 8
7 + 7	8 + 8	3 + 3	5 + 5	2 + 2
6 + 6	9 + 9	Free Double	7 + 7	4 + 4
3 + 3	5 + 5	2 + 2	5 + 5	8 + 8
4 + 4	9 + 9	7 + 7	6 + 6	3 + 3

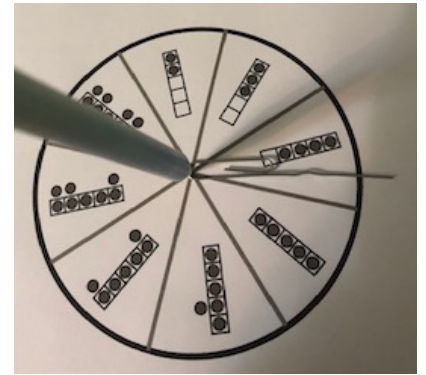
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Play this game on a different day using the domino spinner.

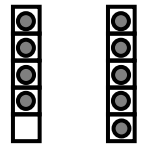
#### Activity 4—Draw the double + 1

**Prep:** Print the spinner page. Partially unfold a paperclip to use as the spinner. Gather a pen or pencil and a sheet of paper.

- Have your child fold a sheet of paper into 4 equal sections.
- Have your child spin the 5-frame spinner.
- In the first section of the paper, have your child draw what is on the spinner section where the paper clip is pointing.



- Have your child draw a second image showing one more.
- Have your child spin the spinner a second time and draw the related double + 1 in the next section.
- Repeat by having your child spin the spinner and draw the related double + 1 in the next section on your paper a total of 8 times (4 drawings on the front and 4 drawings on the back of the paper).

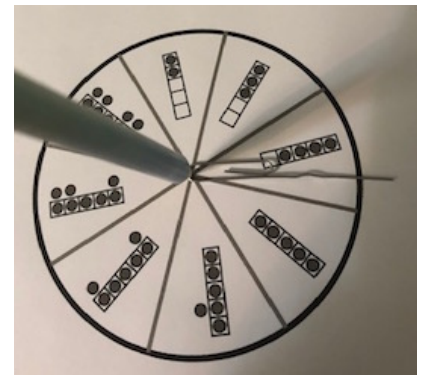


Repeat this activity on a different day using the domino dot spinner.

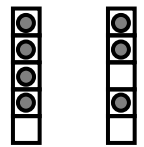
#### Activity 5—Draw the double – 1

**Prep:** Print the spinner page. Partially unfold a paperclip to use as the spinner. Gather a pen or pencil and a sheet of paper.

- Have your child fold a sheet of paper into 4 equal sections.
- Have your child spin the 5-frame spinner.
- In the first section of the paper, have your child draw what is on the spinner section where the paper clip is pointing.



- Have your child draw a second image showing one fewer.
- Have your child spin the spinner a second time and draw the related double – 1 in the next section.
- Repeat by having your child spin the spinner and draw the related double – 1 in the next section on your paper a total of 8 times (4 drawings on the front and 4 drawings on the back of the paper).



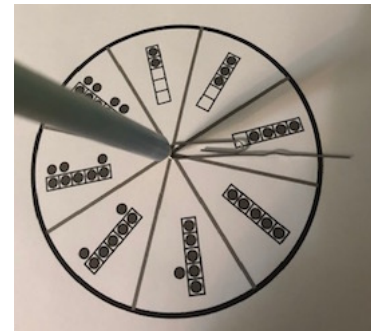
Repeat this activity on a different day using the domino dot spinner.

## Activity 6—Doubles + 1 or – 1 Match Game

**Prep:** Print the Doubles + 1 or – 1 Match Game gameboard. Gather about 12 game pieces per player (these can be different types of beans or different colors of paper cut into small squares). Partially unfold a paperclip to use as the spinner. Gather or print the spinner page from Activity 1.

To play:

- Players take turns spinning the 5-frame spinner.
- Players claim a spot by naming the double + 1 or – 1 (“double 4 and 1 more” or “double 4 and 1 fewer”) and placing a game piece on the associated double + 1 or double – 1 on the gameboard. There can only be one game piece per spot.



Doubles + 1 or -1 Match Game

2 + 3	4 + 5	7 + 6	9 + 10	8 + 9
7 + 8	9 + 8	3 + 4	6 + 5	3 + 2
6 + 7	9 + 10	Free Space	7 + 8	5 + 4
3 + 4	6 + 5	3 + 2	5 + 6	8 + 9
4 + 5	10 + 9	8 + 7	6 + 7	4 + 3

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- The goal is to be the first to claim 3 spaces in a row--horizontally, vertically, or diagonally.
- When a player wins, clear the board and play again.

Play this game on a different day using the domino spinner.

Similar activities can be done for doubles + 2 or doubles – 2.

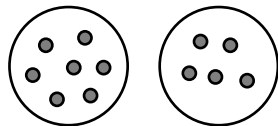
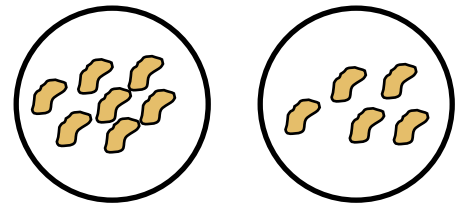


## Subtraction Activities

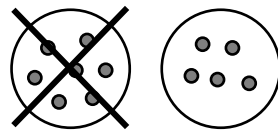
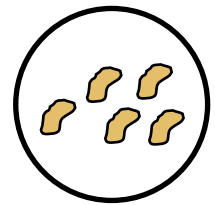
**Materials:** dried beans, 2 paper plates or sheets of paper, something to draw with and draw on.

### Activity 1—Subtraction as removing objects

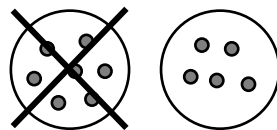
- Give your child 11 to 19 beans.
- Ask your child to count the beans.
- Have your child separate the beans between the 2 plates (or sheets of paper).
- Have your child draw a picture to match.



- Remove one of the plates.
- Have your child cross out the plate that was removed (on their drawing).



- Under their drawing, have your child write a subtraction problem to match ( $12 - 7 = 5$ )



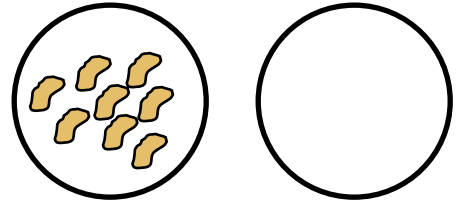
$$12 - 7 = 5$$

- Have your child find another way to separate the same quantity (For example, 8 and 4, 9 and 3, 10 and 2, 11 and 1, 12 and 0, 0 and 12, 1 and 11, 2 and 10, 3 and 9, 4 and 8, 5 and 7, 6 and 6).
- Repeat the above steps.
- See how many different problems your child can make for the same number of beans.

Repeat the above activity for a different number of beans on a different day.

**Activity 2—Missing Addend (Finding the missing part is another way to think about subtraction. We call this strategy, “Think addition”.)**

- Give your child 11 to 19 beans.
- Ask your child to count the beans.
- Have your child cover their eyes.
- Place some of the beans on one of the plates and the rest of the beans hidden under the other plate. (For example, if you start with 12 beans, place 8 beans on one plate. Hide 4 beans under the other plate by turning the plate over.)



- Write the problem showing a missing piece. For our example it would be

$$8 + \square = 12$$

- Ask your child, “How many are hidden?”
- Have your child fill in the box with the answer.

$$8 + \boxed{4} = 12$$

- Have your child check under the plate to check his or her answer.
- Repeat the above steps for the same number of beans, hiding a different number under the plate (For example, show 5 beans and hide 7 under the plate).

Repeat the above activity for a different number of beans on a different day.

**Activity 3—How many jumps? How far apart? (Building subtraction as difference or comparison.)**

- Give your child the number track labeled 1 to 20.



- Have your child put a bean on “5.”



- Ask, “How many jumps to get to 8?” (3 jumps)
- Your child may use the bean to jump.
- Write,

$$5 + \square = 8 \quad \text{or} \quad 8 = 5 + \square$$

- Have your child write the number in the box.

$$5 + \boxed{3} = 8$$

- Have your child find other numbers that are 3 apart. (For example, 11 is 3 more than 8. 15 is 3 more than 12. 12 is 3 more than 9.)
- Have your child record each of their findings as we did above. For example,  $11 = 8 + \underline{3}$  or  $8 + \underline{3} = 11$ ,  $15 = 12 + \underline{3}$  or  $12 + \underline{3} = 15$ ,  $12 = 9 + \underline{3}$  or  $9 + \underline{3} = 12$ .)

Repeat the above activity for other start numbers and other distances on a different day. (For example, start at 7. How many jumps to get to 13? Find other numbers that are 6 apart.)

## **Measurement Activities**

### **Activity 1—Ordering Length**

- Have your child gather 3 different objects they find in your home, yard, or neighborhood that are shorter than an adult’s shoe.
- Have your child order the objects by length.
- Ask, “Which is the longest?”
- Ask, “Which is the shortest?”
- Have them draw a picture to show the order.
- Point to 2 of the objects. Ask, “Which is longer?”
- Point to 2 different objects. Ask, “Which is shorter?”

### **Activity 2—What’s the length?**

**Materials:** One or more of the following: New crayons, popsicle sticks, same sized spoons, forks.

- Have your child line up enough spoons (or popsicle sticks, crayons, etc.) to find the lengths of different objects around the house (e.g., table, bookshelf, TV).
- Have students draw a picture to match.

### **Activity 3—Small units, big units**

It is important for your child to understand that the bigger the unit you use to measure, the fewer you need. For example, it will take fewer giant steps to measure a distance than heel-to-toe steps.

- Have your child predict how many giant steps it will take to cross the room.
- Have your child walk across the room in giant steps counting the steps as they go.
- Have your child predict how many heel-to-toe steps it will take to cross the room.
- Have your child walk across the room using heel-to-toe steps counting the steps as they go.
- Ask, “What did you notice?” (For example, it took more heel-to-toe steps to walk across the room).
- Repeat for other distances (e.g., length of other rooms, across the yard, across a playground, down the block, etc.).
- Have your child draw a picture to show the items they measured and the number of steps needed.

## Geometry Activities

### Activity 1—Triangle Explorations

**Materials:** Straws cut in different lengths or different lengths of sticks.

- Have your child make triangles by putting different straw (or stick) lengths together.
- Have your child draw pictures of the triangles he or she made. (Note: it is important for your child to understand that triangles can have different side lengths. They can also be turned in many different ways.)



### Activity 2—Tangram Explorations

**Prep:** Print and cut out the tangram pieces.

- Have your child make different shapes or designs using 2 of the tangram pieces.
- Have your child draw a picture of each of the shapes or designs that they make.
- Have your child see how many different designs he or she can make with any 2 of the pieces.

Repeat using 3, 4, 5, 6 or all 7 of the pieces on different days.

### Activity 3—Fair and square

- Have your child help you bake cupcakes or brownies.
- Have your child cut the brownie (or cupcake) to share with you so that it is a fair share.
- Have your child see if they can cut the brownie (or cupcake) into 2 equal pieces in more than one way.
- Have your child cut the brownie (or cupcake) so that 4 people would each get a fair share.
- Have your child see if they can cut the brownie (or cupcake) into 4 equal pieces in more than one way.

### Activity 4—Fair and square with play-dough

- Have your child mold the play-dough into a “brownie.”
- Have your child cut the “brownie” into 2 equal pieces and draw a picture to match.
- Have your child see if he or she can cut their “brownie” into 2 different equal pieces in more than one way.
- Have him or her draw a picture to show each way that he or she cut the “brownie.”
- Repeat for a circular play-dough “cookie.” (He or she can use the play-dough container to cut out the “cookie.”)
- If available, use cookie cutters to make other “cookie” shapes. Have your child see if he or she can cut the “cookie” into 2 equal pieces.

Repeat the above activity for 4 equal pieces on a different day.