

## Early Elementary Week 9: Math Dominoes

1	<p>At a round table, there are chairs placed with the same distance between them. They are numbered consecutively 1,2,3,... Peter is sitting on chair number 11, directly across from Chris, who is sitting on chair number 4. How many chairs are there at the table?</p>	$2 2$
2	<p>How many digits have to be written in order to write down every number from 1 to 100 inclusive?</p>	$5 2$
3	<p>An adult ticket to the zoo costs \$4, and a ticket for a child is \$1 cheaper. On a certain Sunday, a father went to the zoo with his two children. How much did they have to pay for the tickets?</p>	$3 1$

4	<p>The sum of two numbers is 45. At least one of them must be less than</p> <ul style="list-style-type: none"><li>a. 5</li><li>b. 18</li><li>c. 20</li><li>d. 22</li><li>e. 23</li></ul>	$8 2$
5	<p>Anne, Clara, Michael, and Don had an apple eating contest. The person who ate the most apples won. Dan ate more apples than Clara, and Michael ate fewer apples than Anne. We also know that Dan did not win the contest. Who ate the most apples?</p>	$4 1$

6	How many two-digit numbers are there where the ones digit is greater than the tens digit?	$5 3$
7	Right now, Mary is five times as old as her sister Li. In 6 years, she will be twice as old as Li. How old will Mary be in 10 years?	$3 3$
8	Aunt Anna is 42 years old. Caitlin is 5 years younger than Brianna, and Brianna is half as old as Aunt Anna. How old is Caitlin?	$4 2$
9	If a loaf of bread can be cut into 9 slices, how many sandwiches can be made with 3 loaves?	$0 2$

<b>10</b>	A class has 5 girls. Each girl owns 3 books, and each book has 20 pages. How many pages are there total in the class?	<b>5 1</b>
-----------	---	------------

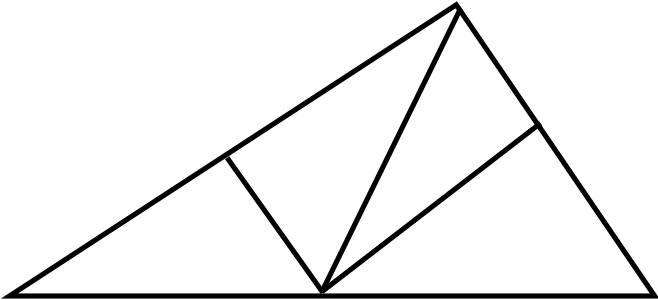
<b>11</b>	In a certain game show, each participant begins the game with 14 points and has to answer 18 questions. For each correct answer, the participant gains 1 point. For each incorrect answer, the participant loses 2 points. If Bob had 14 points by the end of the game show, how many questions did he answer correctly?	<b>7 2</b>
-----------	--	------------

<b>12</b>	Maya is coloring a picture with 3 flowers, which are each a different color. She has blue, red, and green markers. How many different ways can she color the flowers?	<b>4 3</b>
-----------	---	------------

<b>13</b>	Kate and Emma were sitting in the same row on a bus. Kate was seated in the 10 <sup>th</sup> row from the front and Emma was seated in the 27 <sup>th</sup> row from the back. How many rows of seats were there on the bus?	<b>0 3</b>
-----------	--	------------

<b>14</b>	How do you write the number 57 in binary?	<b>4 4</b>
-----------	---	------------

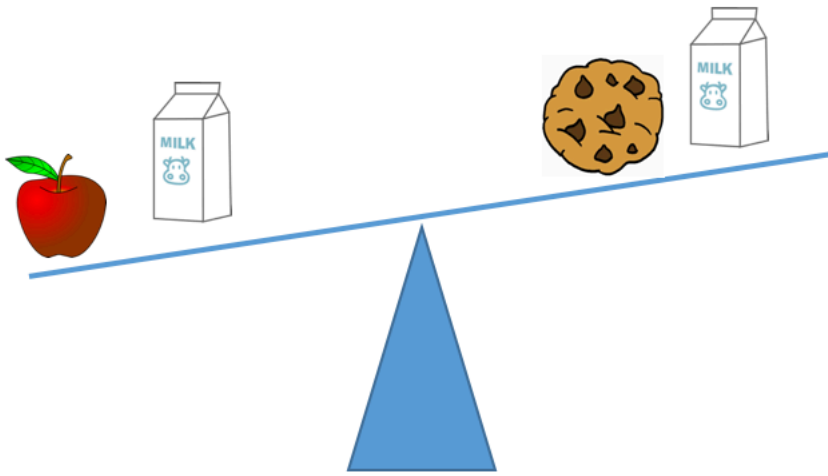
15	<p>The weight of one magic grapefruit equals the weight of one third of a grapefruit plus 4 pounds. How much does a grapefruit weigh?</p>	$3\frac{1}{4}$
16	<p>The weight of 3 pumpkins equals to the weight of 1 pumpkin plus a 6 pound weight. How much does a pumpkin weigh?</p>	$2\frac{2}{3}$
17	<p>Barbara observes that the weight of an apple and a notebook equals the weight of one water bottle plus 200 grams. She also observes that the weight of one water bottle is equal to the weight of one apple plus 300 grams. How much does a notebook weigh?</p> <p>Hint: Use balance scales to help you solve the problem!</p>	$8\frac{1}{3}$

18	A log that is 32 meters long has to be cut into pieces that are each 4 meters. How many cuts will be made?	$0 4$
19	On a balance scale, we can balance 3 watermelons on one side and an 9 pound weight on the other. How much does a watermelon weigh?	$1 2$
20	<p>How many triangles are there in the following image?</p> 	$6 4$

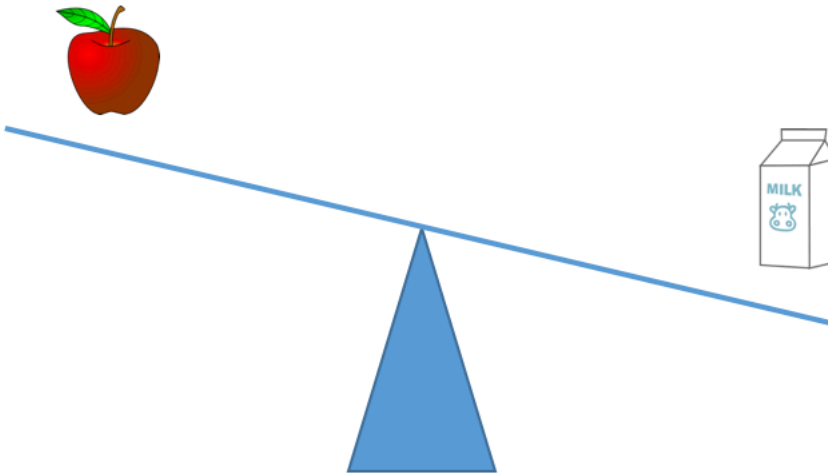
<b>21</b>	<p>Tom wrote various words in code in such a way that different digits represent different letters and the same digit represents the same letter. For example, the word BALL was coded as 3488. One of the words was coded as 6155491. Which one?</p> <p>A) SURGEON B) HARBOUR C) SWEATER D) MESSAGE</p>	<b>5 4</b>
<b>22</b>	<p>Andy was hiking in the mountains for 4 days. On the first day, he hiked twice as much as on the second day. He hiked 15 km on the last day. After resting a lot on the second day, he hiked on the third day as much as he did on the first and second days combined. All together, he hiked 51 km. How many kilometers did he hike on each of the days?</p>	<b>1 6</b>
<b>23</b>	<p>Katherine is trying to figure out how many different outfits she can make from the items in her refrigerator: 3 types of shirts, 2 types of pants, and 5 types of shoes. Her outfit must have 1 shirt, 1 pair of pants, and 1 pair of shoes. How many different outfits can she make?</p>	<b>2 5</b>



24	<p>Following the rules for Young's Diagrams, how many possible houses can be drawn to represent the number 5?</p> <p>The rules are:</p> <ol style="list-style-type: none"> <li>1) an upper apartment must have a lower apartment beneath it</li> <li>2) there can be no gaps</li> <li>3) the tallest side must be the left side</li> </ol>	9 1
25	<p>Lee and Bonny are baking brownies. Lee puts 5 red, 5 green, and 5 blue M&amp;M's in a bag and asks Bonny pick some out to put on the cookies.</p> <p>(a) How many M&amp;M's does Bonny need to take out to make sure she picks at least 4 that are the same color?</p> <p>(b) How many M&amp;M's does Ashley need to take out to make sure she picks at least 2 that are green?</p>	4 5



26



Which is the heaviest item?

2|6

27


Emma ran 9 more miles than Mikey did. In total, she ran twice as far as he ran. How far did Mikey run?

6|2

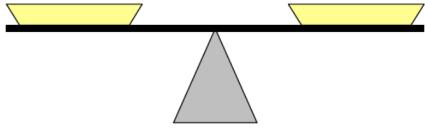
28	<p>Place +, x, and = to make the following statement true:</p> <p>1 2 3 7 4 3</p>	6 0
29	<p>The following numbers are in binary.</p> <p>What is <math>111+101</math>?</p> <p>Write your answer in binary notation.</p>	2 1
30	<p>Bella wrote down all the numbers from 1 to 60. How many times did she write the digit 4?</p>	7 3

31	<p>Here is a sequence of numbers: 128, 64, 32, 16, ...</p> <p>What should be the next two numbers?</p>	$1 1$
32	<p>What is the number 11011011 in decimal (normal) notation?</p>	$6 1$
33	<p>Put + and = signs into the following numbers in order to make an equality.</p> <p style="text-align: center;"><b>8 2 7 1 7 1 8</b></p>	$6 3$

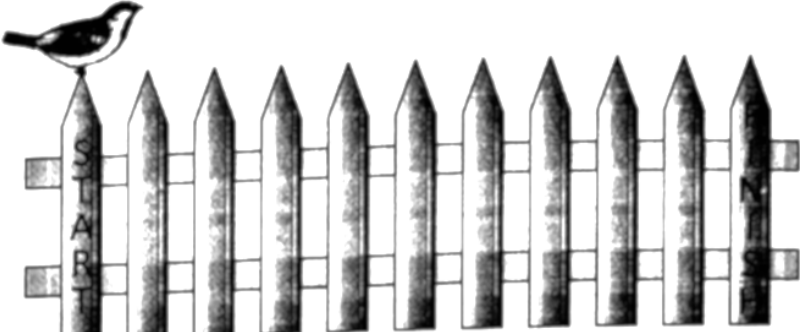
34	<p>As Reina wrote an equation on the board, she forgot one number. What is the digit?</p> $57 + 9 + 1 + 42 = 47 + 77$	0 0
35	<p>We place the signs +, - and = between the digits 4 8 3 3 6 9 in such a way that an equation is built. The sequence of the signs is:</p> <p>A) +, - = B) -, +, = C) +, +, = D) +, =, - E) -, =, +</p>	2 8
36	<p>Together, Chip and Dale have 8 nuts. They divide them equally. Chip ate 1 nut. How many nuts does he have left?</p>	0 1

<p>37</p>	<p>Which dots are covered?</p>  <p>A) ●●●○○    B) ●○○</p> <p>C) ●●●○○○    D) ●●●●●○</p> <p>E) ●○○●●</p>	<p>8 0</p>
<p>38</p>	<p>Ann's birthday was on a Thursday, and her friend Eva's birthday was 8 days earlier. What day of the week was that?</p>	<p>2 0</p>
<p>39</p>	<p>You are given the following standard weights: 2, 4, 8, 16, 32, ... (the list goes higher and higher). How many numbers from 1-100 can you represent with these standard weights?</p>	<p>3 5</p>

40	Every morning, Brady takes 10 minutes to shower, 2 minutes to brush his teeth, 5 minutes to change, 15 minutes to eat breakfast, 4 minutes to pack up school supplies, and 20 minutes to walk to school. If class begins at 8:00 AM, what time does Brady need to wake up?	2 4
41	Anne has several dogs and 4 cats. The number of her cats' ears is equal to the number of her dogs' paws. How many dogs does Anne have?	1 3
42	How do you write the number 26 in binary notation?	1 4

43	How many seconds are in five minutes?	3 0
44	In a class there are 20 students, 8 of whom are girls. At how many desks do the boys sit, if two of them sit at each desk?	1 0
45	<p>Andy put 2 boxes of cookies on the left side of a scale, and 2 brownies plus a 200 gram weight on the right side to balance the weight. Each brownie weighs 20 grams. If each box has a dozen cookies, how many grams does 1 cookie weigh?</p> 	7 1



46	<p>Ken has 52 more candies than Jackie. How many candies should Ken give to Jackie so they have the same number of candies?</p>	4 0
47	<p>Sparrow Jack jumps on a fence from one post to another. Each jump takes him 1 second. He makes 4 jumps ahead, then 1 jump back and again 4 jumps ahead and 1 back, and so on. How many seconds does it take Jack to get from START to FINISH?</p> 	1 9
48	<p>A dog, a cat, and a monkey together weigh 12 pounds. A cat and 2 monkeys weigh 10 pounds. A dog and 3 monkeys together weigh 2 pounds more than a cat, a dog, and one monkey. How much does a cat weigh?</p>	5 5

49	<p>The following numbers are written in binary notation.</p> <p>What is <math>11011 + 100001</math>?</p> <p>Write your answer in binary notation.</p>	3 6
50	<p>There are chickens, pigs, and horses on a farm. There are twice as many pigs as there are chickens. There are the same number of chickens as there are horses. If there are 42 total legs on the farm, how many chickens are there?</p>	2 7