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SOCIAL SALLY'S FRIDAY NIGHT

On Friday night there will be an eighth grade dance at Be-There-Or-Be-Square (BTOBS) Middle School. Social Sally, unfortunately, just broke up with her boyfriend of two weeks, Slimy-Sylvester. Now what will she do? She could try to get back together with Slimy, at least until Friday. However, Know-All-The-News Nell heard from several other friends that Muscle-Man-Mike and Dan-The-Tough-Guy-Man are both available for Friday's dance.

Nell has also informed Sally that Sugar-And-Sweet Shivani may ask Dan if Preppie Pedro, her first choice, must stay home and vacuum the cat. (Don't ask.) Also, Slimy Sly is waiting to hear if Jesting Jessie will say yes or no. Furthermore, Muscle-Man-Mike certainly has plenty of young, respectable women he could ask. Then there is Sally's best friend, Dreammie Jeannie, who wants desperately to go with Mike. Would Sally say yes if Mike asks her, and lose her best friend, or would she go with Jeannie?

Don't forget Sally's Aunt Mayflower who has been planning to visit for almost a decade and is scheduled to arrive Friday night. If this happens, Sally must stay home to greet her dear, eccentric aunt. However, Aunt Mayflower has threatened to visit five times in the last three months and still has not arrived. There is a good chance she will not make it on Friday, but you never know!

In addition, Social Sally was anything but silent in math class today and the teacher may call home. If that happens, Sally will not go anywhere on Friday night.

Journal Assignment

Step 1: List all possible outcomes for Sally's Friday night.

Step 2: Determine the probability of Sally's going to the dance on Friday night. Show all work and describe how you calculated the probability.

Step 3: Choose one outcome for Sally's Friday night from your list in Step 1 and calculate the probability for that outcome.

Step 4: Write a story about Sally's Friday night. Choose ONE outcome from your list in Step 1 and be ready to share your story with the class.

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NEW-SHOES-WHITAKER IS WELL HEELED

New-Shoes-Whitaker loves the look, the smell, the feel of new shoes. He can't help himself. Every time he steps foot into a mall he buys a new pair of shoes (or sneakers, or sandals). He probably could fill his entire house with empty shoe boxes, if he hadn't thrown them out.

In order to keep his shoes looking (and smelling) new, New-Shoes-Whitaker has devised a system where he only wears a certain color shoe on a certain day of the week. Mondays are neutral tones of brown. Tuesdays are reserved for varying shades of navy. Wednesday brings the colorless class of whites, usually sneakers. Thursdays are devoted to earthen shades of green and Fridays are fitted with basic black. Weekends, Whitaker tries to stay barefoot; it gives his feet a chance to air out.

For the new school year, New-Shoes-Whitaker purchased 20 brown, 14 navy, 25 white, 16 green, and 18 black pairs of shoes. Whitaker was wondering what all the possible combinations of shoes he could wear in one week were. If there are 42 weeks in a school year, are there enough different combinations of shoes for each week?

Journal Assignment

Step 1: Calculate all the possible combinations of shoes that New-Shoes-Whitaker could wear in one week. Show all work and explain your answer.

Step 2: Are there enough combinations to last 42 weeks of school?

Step 3: If New-Shoes-Whitaker does not buy any more new shoes for the entire 42 weeks of school, what is the maximum number of times he would have to wear the same pair of shoes to stay on his 'color' schedule? Please explain your answer.

Step 4: Slimy Sylvester secretly switched sneakers with New-Shoes-Whitaker during Wednesday's gym class at the pool. Please write a story about what New-Shoes did when he discovered he was accidentally wearing Slimy Sylvester's second hand sneakers.

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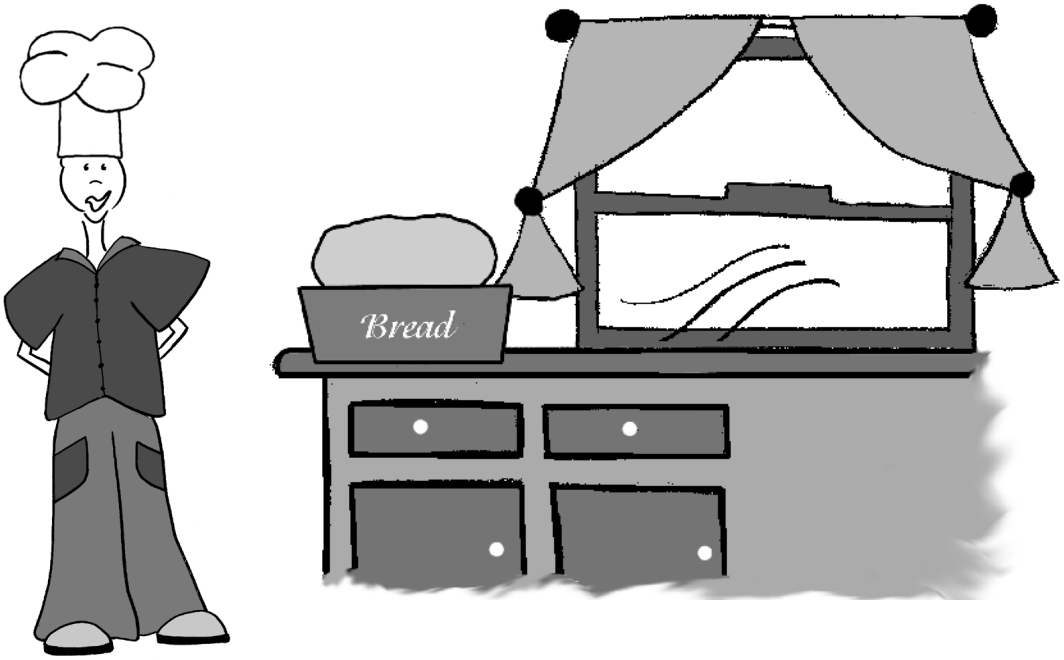
FEARLESS FREDDIE SWEATS OUT THE SCIENCE FAIR

It was time to pick lab partners for the science fair at Be-There-Or-Be-Square Middle School. The teacher picked out names randomly from a beaker and Fearless Freddie could not hide his disappointment. He declared “Oh, rats!” as he was placed with Mountain Climbing Mossa and Mathematical Martha. The group decided to study how the growth of yeast affects baking bread. They would bake two loaves with yeast, two loaves without yeast, and two loaves without sugar. Fearless Freddie was given the task of baking two loaves of bread without sugar. The girls assured Freddie that they would take care of all the details of the project, including the written report. All he had to do was arrive next Thursday evening, dressed nicely for the science fair, with his loaves of bread in hand. “What a cinch!” Fearless Freddie thought. “By the way,” Mossa added, "this is worth two test grades, and if you mess this up I’ll be forced to publicly humiliate you in another arm wrestling match.” Fearless Freddie, insulted, imitated her threat in a mocking tone and replied, "C’mon Mossa, don’t sweat it. This is Fearless Freddie you're dealing with.”

Next Thursday arrived and Fearless Freddie, in a whirlwind of panic, flew home from football practice at 3:40 p.m. Immediately, he mixed all the ingredients for the bread leaving out the sugar. The recipe explains that once the dough is mixed, it must be left in a warm place until it doubles in size. This should take about an hour. Then, the dough must be split in half and left to rise again until it doubles once more (about another hour). It is then placed in the oven and baked for 45 minutes. “Great,” thought Fearless Freddie, “I should be ready by 7 p.m., a half hour earlier than expected.” Freddie, however, forgot one important thing. The whole point of the experiment was to observe what makes yeast grow. Not including the sugar slowed the dough's growth. Not only that, he also left the dough on the kitchen counter in the path of the cool breeze from an open window.



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Journal Assignment

If the dough is 3 inches high before it rises, and it takes 28 minutes to rise an inch, will Freddie have enough time to make it to the science fair?

Step 1: Calculate how much time it takes for the dough to double from 3 inches to 6 inches in height.

Step 2: Calculate the total time it takes from when the dough starts to rise until the bread comes out of the oven. Remember that after the dough rises the first time, it must be split into two loaves (3 inches high) and must double in height again. Then, it is baked for 45 minutes.

Step 3: Does Fearless Freddie make it to the science fair by 7:30 p.m.? Assume he started at 3:40 in the afternoon and that it takes fifteen minutes to travel from his home to school. Show all of your work.

Step 4: Write a story about the science fair. Does Fearless Freddie arrive in time, but still wearing his odoriferous football uniform? Does the group receive a high grade for their project? Or is Fearless Freddie publicly humiliated, yet again, by Mossa?

Fearless Freddie Sweats Out the Science Fair — Assessment Checklist

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CHECKLIST	HIGH	MEDIUM	NEEDS WORK	NOT DONE
1. Student correctly calculates the time it takes for the dough to double in height.	16	14	12	0
2. Student correctly calculates the total time it takes to bake the bread.	16	14	12	0
3. Student correctly converts units of time from minutes to hours and vice versa.	16	14	12	0
4. Student correctly determines when Freddie will arrive at the science fair.	16	14	12	0
5. Student shows all calculations and explains mathematical reasoning in full sentences.	12	9	6	0
6. Student writes a story concluding what happens at the science fair.	12	9	6	0
7. Student's work is neat and presentable.	12	9	6	0

Comments:

Grade: _____