



Smiling Shapes (Line- The Mother of All Shapes)



Once upon a time, a shape called 'Square,' met a shape called 'Trapezoid.' They looked different, yet they had a lot in common.

"Hi, what is your name?" Square was very friendly by nature.

"Trapezoid," answered Trapezoid plainly. He always thought that he was not a popular shape. All he could boast about was a pair of parallel lines and maybe, just maybe, two right angles. No two pairs of right angles, no two pairs of parallel sides. So when this neat shape called Square showed interest in him, he was at his happiest. Before long, they were talking like long lost cousins would.

The very next day, when Trapezoid and Square were playing at the park, a new shape appeared, seemingly from nowhere.

"Hi, I'm Rectangle. I was watching you from a distance and thought, that's strange; I wonder if we're all from the same family."



“There’s an uncanny resemblance which only members of the same family have,” Square gave his input.

Trapezoid did not understand what those big words meant, but when he looked at Rectangle closely, he could not deny the similarity.

“I’m Square, and this is my long lost cousin, Trapezoid.”

“Maybe I’m another one of your long lost cousins,” Rectangle sounded hopeful. The three long lost cousins began to play together.

On Monday morning, Trapezoid, Square, and Rectangle were playing Hide and Seek. It was a lot of fun. Trapezoid was ‘it.’ He did not take long to spot Square, who was hiding behind a sign that said, ‘Square Meals.’ The sign was inviting customers to a neat little place to eat wholesome food.

“Cousin Square must be hiding there,” thought Trapezoid, and he was right.

“See if you can find Rectangle,” said Square. “Boy! He’s good at Hide and Seek!” Trapezoid looked everywhere for Rectangle until he found him on the house, under the roof.

On Tuesday morning, the three cousins met a shape called ‘Parallelogram’ at the grocery store. He looked a lot like the other three shapes, just a little stretched out. Did he want to be their friend?

“Good friends are a treasure. I would be flattered if you called me your friend,” said Parallelogram. Now there were four of them.

“Guys, last night I was at Mrs. Geometry’s pad. Did you know that she is interested in genealogy? That has to do with family trees and learning about your ancestors,” Square explained. She told me about another one of our cousin. His name is Rhombus, and she thought I should try to look for him.”



Square went on to share what he knew of his family history. The cousins all belonged to a very well-known, large family, the Quadrilaterals. The Quadrilaterals were a powerful family with four line segments, obtuse, acute and/or right angles, four corners. Mrs. Geometry had heard about all the cousins gathered together but urged Square to find the whereabouts of Rhombus.

Wednesday was the perfect day for a swim; and for the shapes to meet Rhombus. There he was wading in the pool! All the shapes stood with their mouths wide open when they saw the last long lost member of their clan. He was shimmering, shiny, and sharp. When he told them his other name was 'diamond,' the other Quadrilaterals thought, "Aha! That name suits him better than Rhombus." Time flew as they all exchanged stories and life experiences.



On Thursday, as the Quadrilaterals were enjoying their ice cream cones, another shape from the neighboring table smiled and began chit-chatting with them. His name was 'Equilateral Triangle.' He looked like he could be a half-brother to the Quadrilaterals. "Square's thirst to learn about Family Trees is unquenchable," thought the Quadrilaterals, when they heard him asking Equilateral about the Triangle Clan. The Triangle Clan Family Tree was equally impressive. Over the next hour and a half, the



Quadrilaterals heard some strange names such as Scalene, Isosceles, Obtuse Triangle, Right Triangle, and Acute Triangle.

“Very impressive! You too have faces, edges and vertices, sides and line segments, and angles. You are like our younger brothers!” Square was choking with emotion.

By Thursday afternoon, two more shapes joined the group as they sat reading at the library. Their names were ‘Star,’ and ‘Pentagon.’ The Quadrilaterals were having a hard time remembering the names of the Triangle Clan members. Star made them doubt their smartness. Just when they thought they had sorted the Triangles out, Star’s self introduction of ‘Two entangled triangles make one of me,’ threw them into a deep sea of confusion. However, they accepted Pentagon with open arms. “He looks so interesting! If I stretch all his sides out, he could give us a cute little house to live in,” thought Rhombus.

On Friday, while the whole gang was at the movie theatre, two shapes sitting in seats in front of them introduced themselves as ‘Hexagon’ and ‘Octagon.’ The other shapes welcomed them with big smiles and said, “More the merrier.”

Saturdays are great for ball games,” Square declared one morning. The group divided itself into two teams for a baseball game. Quadrilaterals and Pentagon were on the same team, the Blue Jays. Triangles were joined by Octagon and they called themselves the Red Robins. Hexagon was under the weather and was resting. Star preferred to sit high up atop a mountain and watch everyone play. It was a close match. The Red Robins scored 16 runs and beat the Blue Jays by four runs. That morning, the shapes were at their happiest.



Exhausted but happy, the shapes were resting after the match, when Octagon asked, “Who is that weirdo?” as he eyed a round shape rolling down to them. “Hi, guys, I am Circle; Ellipse wanted to come, too, but was late getting up.

“What can we call him?” Equilateral was desperate to know. “I mean we know his name but he is not like us. He looks like alien. No sides, no angles, no corners, just a big closed curve; Equilateral went on and on.

Nobody knew what to say; so they were overjoyed to see Ms. Line arrive, as if on cue. She was the Mother of all shapes, Ms. Infinite, Ms. Never-ending, Ms. Line, herself.

“Why is this poor soul sitting in the corner?” Ms. Line asked as she glanced over at Circle .

“Oh, Ms. Line, we’re not sure if he can play with us,” quipped Square. “We just don’t feel comfortable because he looks so different from us,” Equilateral added. “He can watch us play, though”.

Ms. Line was not about to tolerate any talk of conditions. Turning to Circle, she said, “ Those of you boasting about the number of sides and angles you have, you should know that Circle can have 360 corners, and 360 lines, if it chooses. Don’t doubt its power.”



Ms. Line looked around at all the shapes. They seemed to be looking at circle with a newfound respect. “Now let’s exercise and have some fun.” She took a big segment out from her unending length and said, “Touching your toes will keep you trim.” Everyone tried to touch their toes and began laughing and joking. The segment laughed at Square’s joke so hard that all the strain of that laugh made it coil up. The shapes could not believe what they saw. In front of their very eyes the straight segment had become a round circle.



Brain Food

- 1/ Draw some Regular Polygons in a circle (Use protractor, straight edge and compass). Name the polygons.
- 2/ Write names of the polygons with 5,6,7,8,9 sides.
- 3/ Draw a star without lifting your pencil.



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