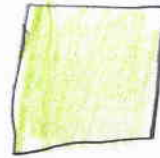


Adventure  
to

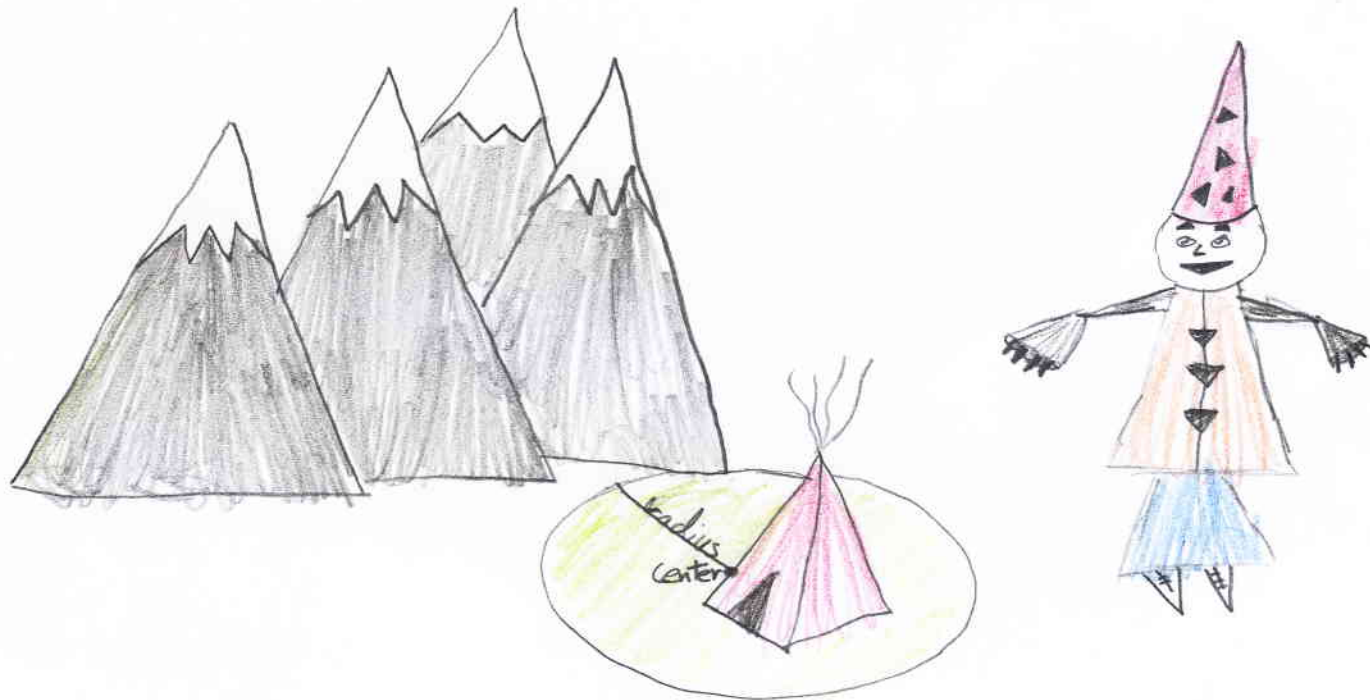
Polygon

Land

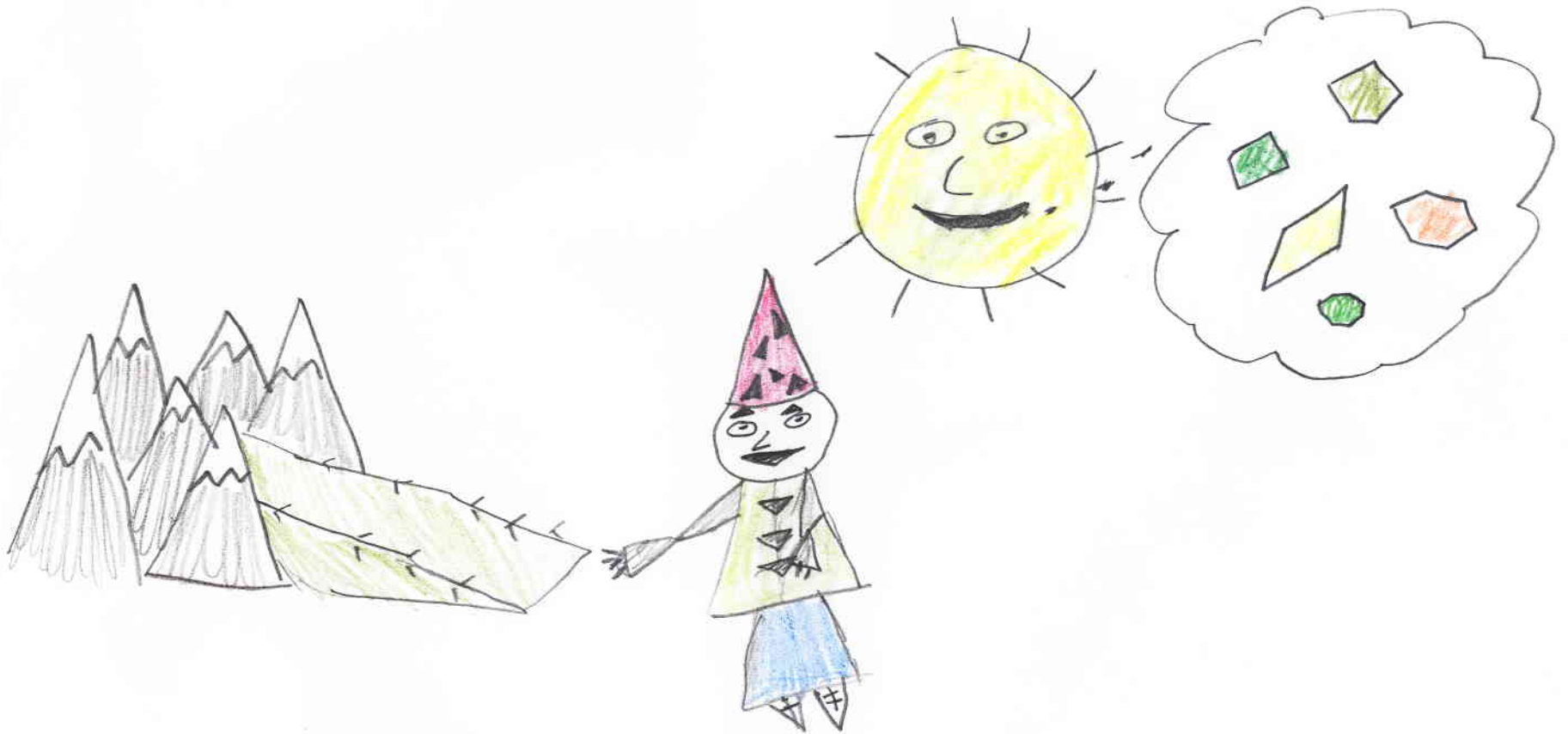
By  
Ben Dungan



In a land far away, there rose up from the ground the steep Acute Triangle Mountains. In the middle of the mountains, was a circle valley. A wizard lived on the center of the circle valley; just a radius, or distance for the edge of a circle to its center, from the edge of the Circular Valley. He was the Wizard of Triangles. Triangles are his favorite for they have three sides. There-for he lived in a triangular teepee.



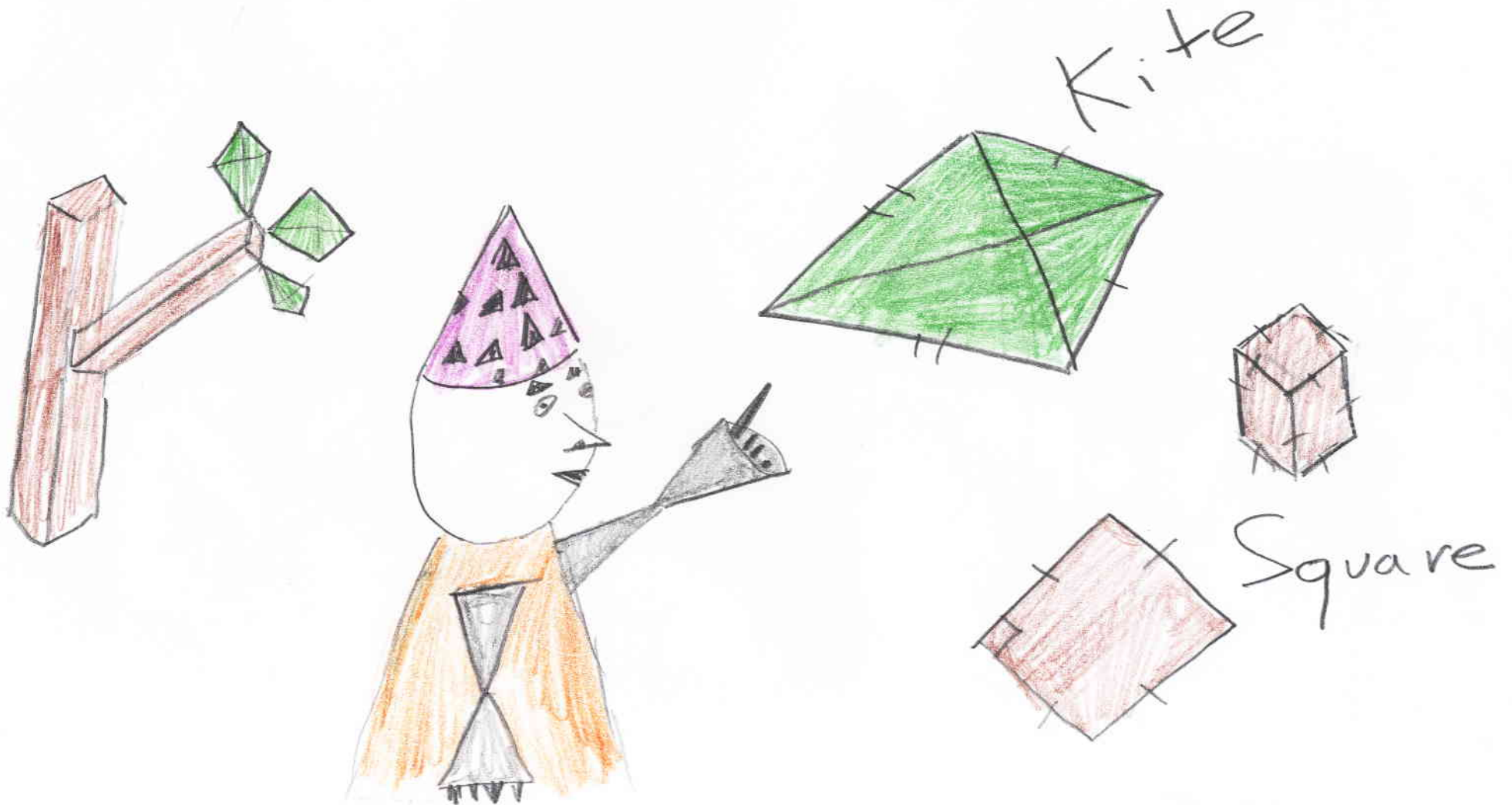
**One** day, the wizard's friend the sun, or circle in the sky, told him about the land of polygons. The sun told him of quadrilaterals, or 4 sided polygon, and of the great other multi sided shapes. Once the wizard had heard this, he packed up his things and left to see these things for himself. So he headed down the parallel path through the mountains on an polygon adventure.



**After** he got out of the mountains, he found himself in the Quadrilateral Forest. He saw the giant rectangular trunks of trees branching out into kite leaves. He quickly learned that rectangles were parallelograms, or shape with two pairs of parallel sides equal in length. Rectangles also had right angles that were 90 degrees, or straight up.



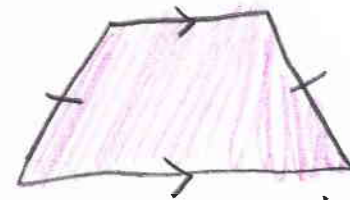
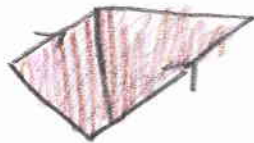
**Next**, he looked at the kite leaves. A kite was a quadrilateral with two pairs equal, or congruent, sides. As he walked along, he noticed rectangles where all the sides are equal. These shapes are called squares.



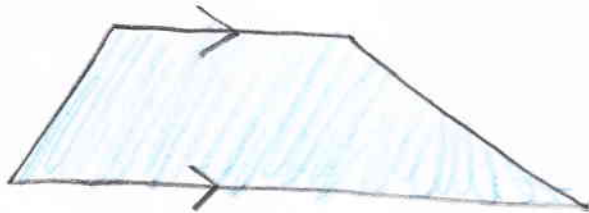
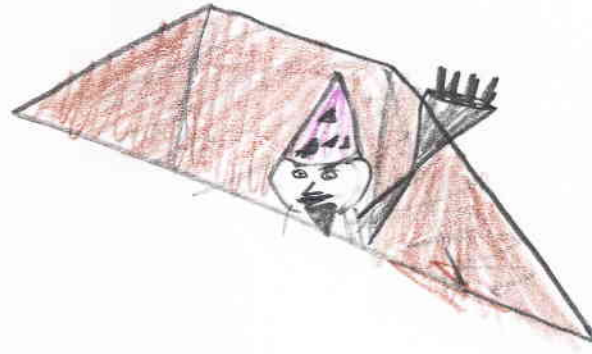
Then, as he walked he came upon beautiful diamond shapes. These shapes had all their sides equal but no right angle. He was confused at what to name them. He decided to name the parallelogram with equal sides and no right angle, a rhombus.



As he traveled along, he found a new quadrilateral with only one pair of parallel sides. He was puzzled though because it didn't have any equal sides. He fell into a hole shaped like it. After he climbed out, he decided to name it a trap-ezoid. As he hiked he saw similar shaped shapes only they did have a pair of equal sides. He decided to name it a isosceles trapezoid after an isosceles triangle, or having two equal sides, just like the trapezoid.



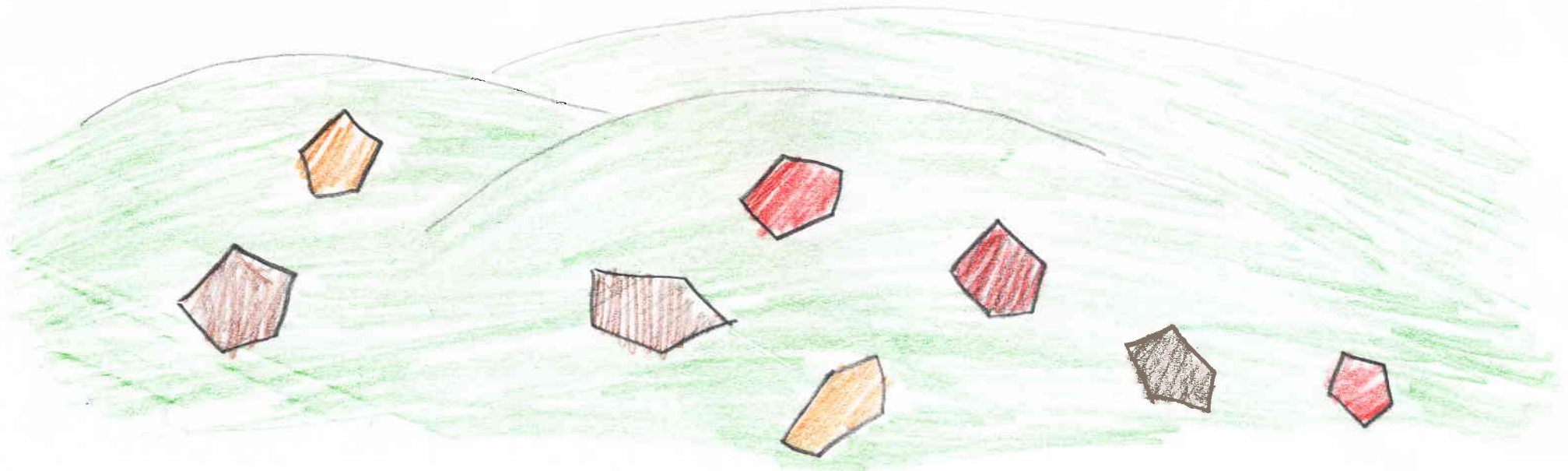
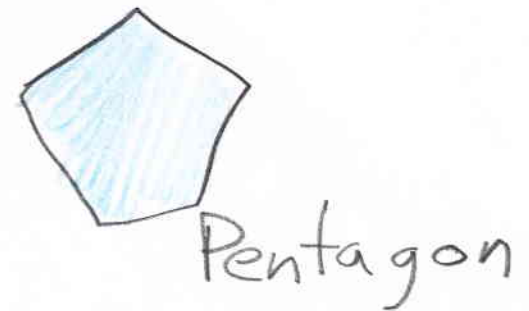
Isosceles  
Trapezoid



Trapezoid



**The** wizard finally got through the forest and traveled into the great plain of polygons. He soon found a five sided polygon. He paused and wondered what he should name it. He decided to name it a penta-gon, penta meaning five in Latin (a very old language). As the discoveries continued he decided to use Latin for all the shapes found.



**Later**, he found hexagons, hexa meaning six. Also he found septagons(7), octagons(8), nonagons(9), decagons(10), and so on. As he traveled farther, he came upon a stone castle.



Nonagon



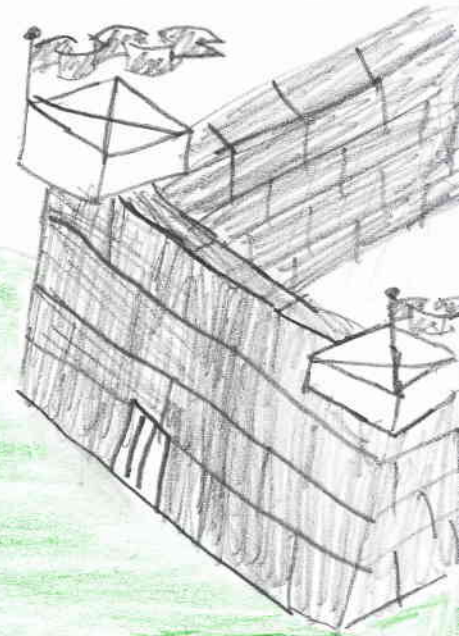
Octagon



Decagon

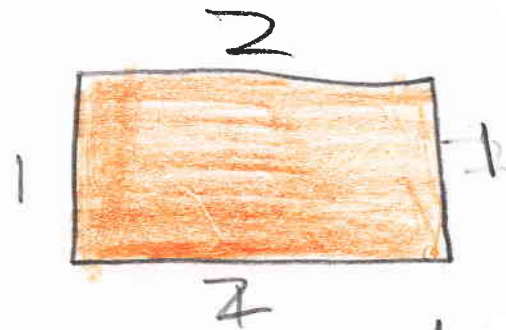
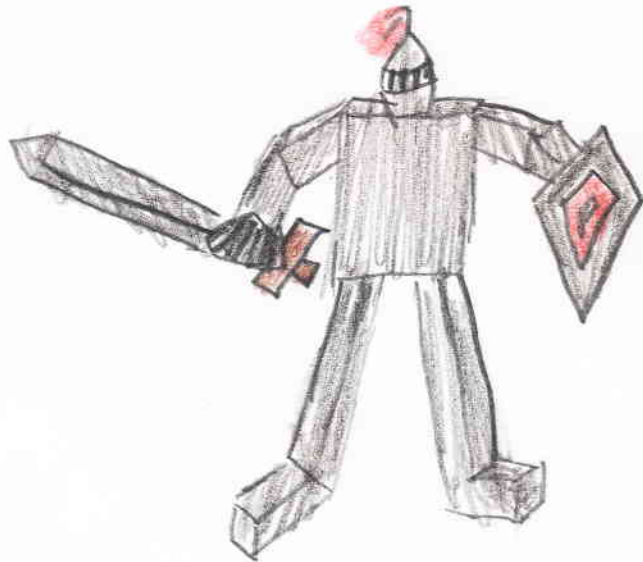


Septagon



**When** he entered the castle he met Sir Knight Perimeter. The knight told him how they measure the edges of a shape. This sum of all the edges is called the perimeter. Perimeter then took him to learn more with Lady Area.

Perimeter

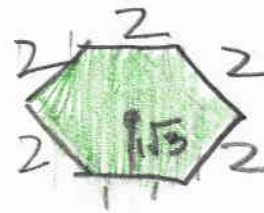
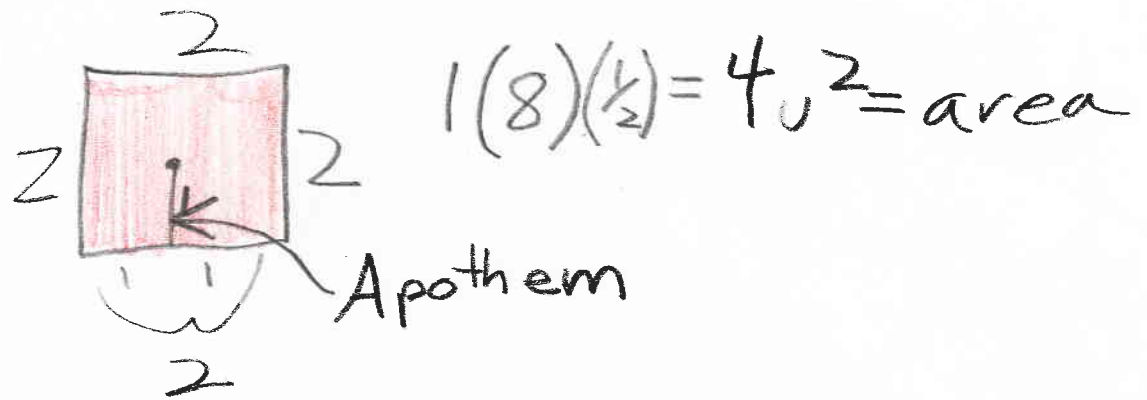


$$1+1+2+2=6$$



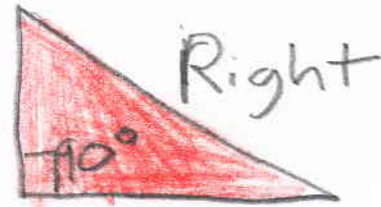
$$1+1+1+1+2=6$$

**After** he met Lady Area, she started teaching him. He already new that you find the area of a triangle by taking base times height. Lady Area told him to find the area of any polygon you take apothem, or distance from center of shape to side, times half the perimeter. After talking, they went to see King Polygon.



$$1/\sqrt{3} (12) (1/2) = 6\sqrt{3} = \text{area}$$

The wizard was very happy to meet King Polygon. The wizard taught the king of the different types of triangles. "Right triangles are triangles with a right angle", he said. He told him about obtuse triangles, or triangles with an angle more than 90 degrees, and acute triangles, triangles with angles less than 90 degrees.



**When** they were done talking the wizard left for his home in the circular valley. On his way back he remembered and saw ~~may~~ many of the new things he had learned on his trip. He lived happily ever after.



*The End*