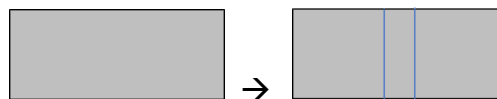


Math Mosaic Circles
Group “Euler”

Name: _____

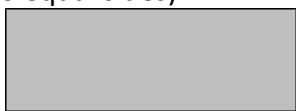
1. Label each gray shape below. Then draw straight lines to split each shape into the necessary figures (see example). **You may need to draw more than one line.**

Example: split into two squares and a rectangle



rectangle

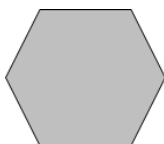
- a. Split into four isosceles triangles (triangles that have two equal sides)



- b. Split into two trapezoids



- c. Split into three rhombuses



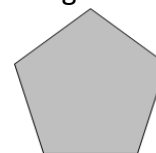
- d. Split into three equilateral triangles



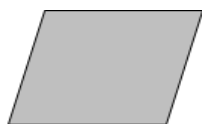
- e. Split into a rectangle and two right triangles



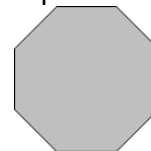
- f. Split into three triangles



- g. Split into a rectangle and two right triangles



- h. Split into two trapezoids and a rectangle



Math Mosaic Circles
Group "Euler"

Name: _____

2. Practice Kangaroo problems

6. Rachel biked 19 miles. Laura biked two times that distance, plus another 9 miles. How many more miles did Laura bike than Rachel?

9. The sum of the digits of the year 2016 is equal to 9. What is the next year, after 2016, where the sum of the digits of the year is equal to 9 again?

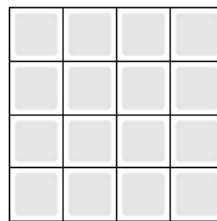
- (A) 2007 (B) 2025 (C) 2034 (D) 2108 (E) 2134



17. The number of dwarfs that can fit under a mushroom is equal to the number of dots on the mushroom cap. The picture below shows one side of each mushroom. The number of dots on the other side is the same. If 30 dwarfs are seeking shelter from the

rain, how many dwarfs will get wet?



- (A) 2 (B) 3 (C) 4 (D) 5 (E) 6



19. Ann has a square sheet of paper: . She cuts these pieces:  out of the sheet, as many as possible. How many pieces does she get?

- (A) 1 (B) 2 (C) 3 (D) 4 (E) 5