



## Work Place Instructions 6D Area or Perimeter

### Each pair of players needs:

- 6D Area or Perimeter Record Sheets, 1 for each player
- 1 or more sheets of 6D Area or Perimeter Grid Paper
- 80 colored tiles or 2 sets of red linear units  
Players use *tiles* if rolling for area; they use *red linear units* if rolling for perimeter
- two 1–6 dice
- 1 colored pencil

- 1 Players decide together if they are going to roll for and keep the *area* or the *perimeter* the same for the rectangles they build. They each circle that word on their own record sheet.
- 2 One player rolls the dice. Using their individual record sheets, each player uses column 1 to record the numbers rolled and column 2 to record the product of the two numbers.
- 3 If players are working with area, they count out tiles to equal the product of the two numbers rolled. If they're working with perimeter, they count out red linear units to equal the product of the two numbers rolled.
- 4 Players lay their tiles or linear units out on the grid paper to form a rectangle.
  - Players may need to use more than 1 sheet of grid paper to build some rectangles.
  - The grid paper is optional for players working with area and using tiles. If players are working with perimeter and using the red linear pieces, they need to lay out the pieces on the grid paper.
- 5 Players record the dimensions, area, and perimeter of the rectangle they made on their record sheets. Some products will not work as perimeters for rectangles. In that case, players just write “impossible” on the line for that roll.
- 6 Players work together to rearrange the tiles or red linear units to form another rectangle (with the same area or perimeter as rolled for the first rectangle) and record the information for it on the next line of the record sheet.
  - Players keep rearranging and forming rectangles with that same area or perimeter until they can't make any more.
  - Players use a colored pencil to draw a line across the table below the information for the last rectangle they were able to make for a pair of numbers.
- 7 Players roll the dice and build as many rectangles as they can for the new area or perimeter.
  - Players must continue to work with the type of measurement they chose for that record sheet, rather than switching from area to perimeter or vice versa.
  - If players roll two numbers they've already rolled today, or two numbers that make the same product, they roll again.
- 8 Players keep rolling and building rectangles until they fill the table or run out of time.

### Game Variations

- A** Use one 1–6 die and one 4–9 die instead of two 1–6 dice.
- B** Use two 4–9 dice instead of two 1–6 dice.







We are working for \_\_\_\_\_.  
area/perimeter

I rolled \_\_\_\_\_ and \_\_\_\_\_.  
number number

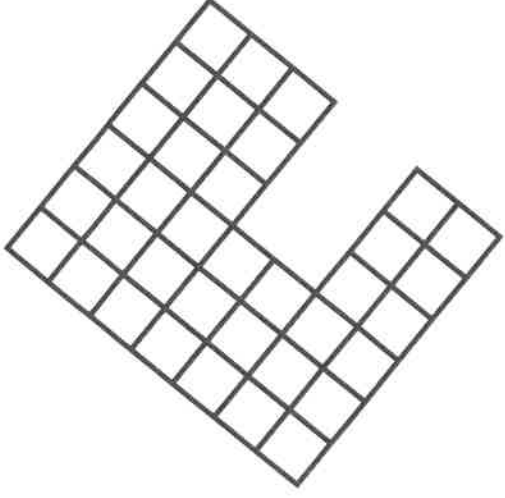
\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_  
number number number

We are finding \_\_\_\_\_, so we  
area/perimeter

need to use the \_\_\_\_\_ units.  
tiles/linear

The dimensions are \_\_\_\_\_ and \_\_\_\_\_.  
number number

The area is \_\_\_\_\_. The perimeter is \_\_\_\_\_.  
number number



When a rectangle has the same area and  
perimeter, it \_\_\_\_\_.

My strategy for figuring out the \_\_\_\_\_ is  
area/perimeter \_\_\_\_\_.