

SOUTH DAKOTA SOUTH DAKOTA SOUTH DAKOTA  
**Counts Counts Counts**

Menu of Problems

These come out of "Mathematics, Teaching in the Middle School" but can be adapted for all grades by just changing the numbers.

Use each of the counting numbers 1, 2, 3, 4, 5, 6, 7, 8 and 9 once and only once in the nine spaces below to make a true mathematics statement. Hint: There is one solution that has a factor of 138. There are also several others.

$$\_ \_ \_ \times \_ \_ \_ = \_ \_ \_ \_ \_ \_ \_ \_ \_$$

Answer: There is more than one possible solution for this puzzler. To follow the hime, let 138 be one of the factors. Then noting that the digits 1, 3, and 8 cannot be repeated, try the eligible two-digit factors 24, 25, 26, 27, 29 and 42 to arrive at  $138 \times 42 = 5796$ . Other correct solutions include  $157 \times 28 = 4396$ ,  $186 \times 39 = 7254$ , and  $198 \times 27 = 5346$

The sum of the measures of the interior angles of a triangle is 180 degrees. What is the sum of the measures of the interior angles of a convex polygon with 20 sides?

Number of sides	Sum of Interior Angles
3	180 degrees
4	360 degrees
5	540 degrees
20	3240 degrees