

3 - 6

**Problem Solving Skills:
Finding a Pattern**

Ex: A volleyball coach tells her players they need to make 1 successful serve at the first practice, 3 at the 2nd practice, 5 at the 3rd, 7 at the 4th, etc. If this pattern continues, how many successful serves will each player need to make at the 8th practice?

P	1	2	3	4	5	6	7	8
S	1	3	5	7	9	11	13	15

Find the rule that describes the pattern. Then find the next 3 terms.

Ex: 3, 6, 9, 12, 15, 18, 21
 $+3$ $+3$ $+3$

Ex: 2, 4, 8, 16, 32, 64, 128
 $\times 2$ $\times 2$ $\times 2$

Ex: 1, 3, 2, 4, 3, 5, 4, 6, 5, 7, 6
 $+2$ -1 $+2$ -1 $+2$ -1 $+2$ -1 $+2$ -1

Look for a pattern and predict the 5th product.

Ex: $10,989 \cdot 9 = 98,901$

$10,989 \cdot 8 = 87,912$

$10,989 \cdot 7 = 76,923$

$10,989 \cdot 6 = 65,934$

$10,989 \cdot 5 = 54,945$

Look for a pattern and predict the 5th product.

$$\text{Ex: } 3 \cdot 37,037 = 111,111$$

$$6 \cdot 37,037 = 222,222$$

$$9 \cdot 37,037 = 333,333$$

$$12 \cdot 37,037 = 444,444$$

$$15 \cdot 37,037 = 555,555$$



Homework:

p.128 #1, 2, 5 - 16