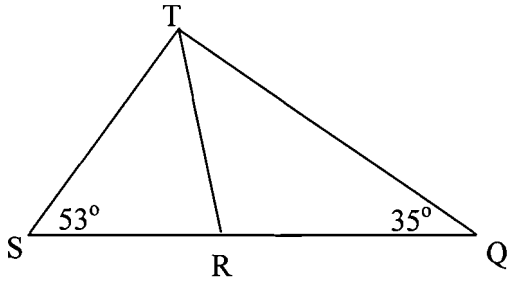


- 51) Given that segment  $RT$  is an angle bisector of angle  $T$ , find the measure of angle  $STR$ .



- A)  $35^\circ$       B)  $46^\circ$       C)  $53^\circ$   
D)  $92^\circ$       E)  $48^\circ$

- 52) The ratio of the sides of triangle  $GHI$  to the corresponding sides of triangle  $JKL$  is 5 to 4. If the measure of side  $HI$  is 35 cm, how long is the corresponding side  $KL$ ?

- A) 7 cm.      B) 14 cm.      C) 21 cm.      D) 28 cm.      E) 24 cm.

- 53) A 35 ft tree casts a 50 ft shadow. At the same time of day, a girl casts a 6 ft shadow. How much taller than the girl is the tree?

- A) 4.2 ft.      B) 31.8 ft.      C) 30.8 ft.      D) 39.2 ft      E) 375 ft.

**Algebraic Concepts: M11.D**

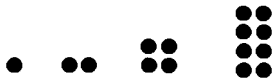
54) Which of the following best describes the pattern 3,6,9,...?

- A)  $n, 2n, 3n, \dots$                       B)  $n^2, n^3, n^4$   
 C)  $n, \frac{n}{2}, \frac{n}{3}, \dots$                       D)  $1+n, 3+n, 5+n$

55) What is the next term in the sequence 1, 6, 36, 216,...?

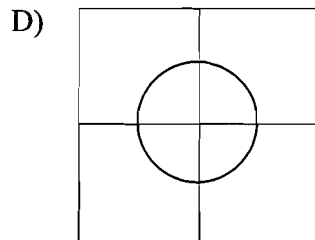
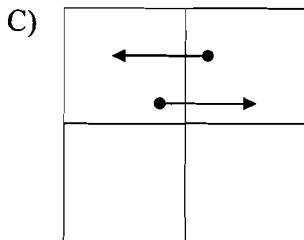
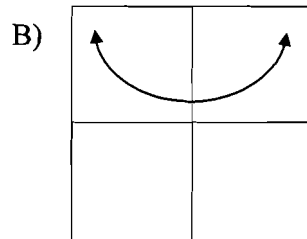
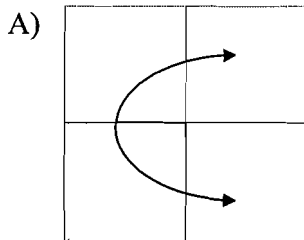
- A) 432              B) 1296              C) 576              D) 996

56) How many dots will be in the 20<sup>th</sup> figure?



- A) 262,144                      B) 524,288  
 C) 1,048,576                      D) 2,097,157

57) Determine from the graphs which relation is a function?



58) Determine which relation is a function.

- A)  $\{(3,-1), (-1,3), (3,4)\}$                       B)  $\{(-1, -2), (-1,-3), (-1,-4)\}$   
 C)  $\{(0,2), (1,2), (2,2)\}$                       D)  $\{(2,0), (2,1), (2,2)\}$

59) What are the solutions of  $4x^2 + 4x - 35 = 0$ ?

- A)  $x = \frac{5}{2} \text{ \& } -\frac{7}{2}$                       B)  $x = -\frac{5}{4} \text{ \& } 7$   
 C)  $x = \frac{5}{4} \text{ \& } -7$                       D)  $x = -\frac{5}{2} \text{ \& } \frac{7}{2}$

60) What ordered pair is the solution of the system

$$\begin{cases} 3y = 3 \\ x + 2y = 4 \end{cases}$$

- A) (2,1)      B) (4,1)      C)  $(\frac{3}{2},1)$       D) Cannot be determined