FINDING PATTERNS

Below are three sets of tables: Patterns 1, 2, and 3. Each row has an expression and its result, such as $\log_2(32) = 5$ or $\log_b(4) = 3$. Find the unique pattern in each set of tables. Be sure that your pattern works for all three tables within that set.

Pattern 1

Expression	Result
$\log_b(4)$	3
$\log_b(6)$	4
$\log_b(24)$	7

Expression	Result
$\log_n(2)$	2
$\log_n(15)$	8
$\log_n(30)$	10

Expression	Result
$\log_m(4)$	6
$\log_m(12)$	12
$\log_m(48)$	18

Pattern 2

Expression	Result
$\log_k(32)$	20
$\log_k(4)$	8
$\log_k(8)$	12

Expression	Result
$\log_r(28)$	16
$\log_r(7)$	9
$\log_r(4)$	7

Expression	Result
$\log_h(45)$	36
$\log_h(5)$	15
$\log_h(9)$	21

Pattern 3

Expression	Result
$\log_v(3)$	5
$\log_v(9)$	10
$\log_v(27)$	15

Expression	Result
$\log_c(5)$	12
$\log_c(25)$	24
$\log_c(125)$	36

Expression	Result
$\log_z(2)$	3
$\log_z(4)$	6
$\log_z(16)$	12