Least Common Multiple

Find the LCM of each set of numbers.

1) 30 and 45

Method #1 (List Multiples)	Method #2 (Prime Factorization)
30 → 30, 60, (90)	30 = [2] · 3 · [5]
45 → 45, (90)	45 = [3^2] · 5
LCM = [90]	LCM = $2 \cdot 3^2 \cdot 5$ = [90]

2) 12, 16, and 36

Method #1

12 → 12, 24, 36, 48, 60, 72, 84, 96, 108, 120, 132, (144)
16 → 16, 32, 48, 64, 80, 96, 112, 128, (144) ; LCM = [144]
36 → 36, 72, 108, (144)

Method #2

$12 = 2^2 \cdot 3$
16 = [2^4]
$36 = 2^2$ · [3^2]

LCM = $2^4 \cdot 3^2$ = [144]