2003-2004: How many asteroids will be in Stage 8?

Though other patterns and solutions are definitely possible, there is a pattern that reveals the hexagonal numbers. Stage 1 has 1 dot. Stage 2 has $1 + (1 \times 6)$ dots. Stage 3 has $1 + (1 \times 6) + (2 \times 6)$ dots. Notice that each stage has the same dots from the previous stage with an outer hexagon added to it. Stage 8 will have
$1 + (1 \times 6) + (2 \times 6) + (3 \times 6) + (4 \times 6) + (5 \times 6) + (6 \times 6) + (7 \times 6) = 1 + 6(1 + 2 + 3 + 4 + 5 + 6 + 7) = 1 + 28(6) = \mathbf{169}$ dots.