

- 1. Gertrude spins a pumpkin such that it rotates 30 degrees every second. If the pumpkin spins at a constant rate for the next 24 seconds, how many complete rotations will have been made?
- 2. What is the largest prime that divides  $2^4 1$ ?
- 3. Compute the remainder when  $10^3$  is divided by 7.
- 4. JJ has scored an 88, 83, and 85 on his first three tests. To be top scorer, he needs an average of at least 88 on his first four tests. What is the lowest score he can achieve on his next test and still be top scorer?
- 5. Regular hexagon TURKEY has side length 1. What is the length of TK?
- 6. How many distinct equilateral triangles can be made with the vertices of a regular hexagon? (A hexagon has 6 sides.)
- 7. What is the remainder when

$$2^{2^{2}}$$

is divided by 64?

12 Minutes

8. What is the seventh smallest number that ends in 3 and is divisible by 9?