

**Review Quiz**  
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1. In the expansion of

$$(2x - 1)^{10}$$

what is the coefficient of  $x^7$ ?

2. Find  $A^2$ ,  $A^3$ , and  $A^4$  for the matrix

$$A = \begin{pmatrix} 1 & 2 \\ 0 & 3 \end{pmatrix}$$

Can you conjecture a formula for  $A^n$  for any natural number  $n$ ? How you would go about proving it?

3. What is the remainder of  $2014^{2014}$  divided by 3?