9 Each term in a sequence of numbers is 30% greater than the previous term. The sequence is plotted on a scatter plot, where y is the xth term of the sequence. Which of the following **best** describes the scatter plot?

Ⓐ The data is best fit by a linear function of the form $f(x) = 1.30x + b$, where $f(0) = b$, because $f(n + 1) = 1.30\,f(n)$.

Ⓑ The data is best fit by an exponential function of the form $f(x) = k(1.30x)$, where $f(0) = k$, because $f(n + 1) = 1.30\,f(n)$.

Ⓒ The data is best fit by a linear function of the form $f(x) = 1.30x + b$, where $f(0) = b$, because $f(n + 1) = f(n) + 1.30$.

Ⓓ The data is best fit by an exponential function of the form $f(x) = k(1.30x)$, where $f(0) = k$, because $f(n + 1) = f(n) + 1.30$.

10 Paul made flyers to promote the grand opening of his bookstore. He gave 20 flyers to his friends, and then handed out 9 flyers every hour. He decides to graph the number of flyers, y, given out over x hours. Which equation **best** describes Paul's graph?

Ⓐ $f(x) = 9x + 20$, because $f(n + 1) = f(n) + 9$ when $f(0) = 20$

Ⓑ $f(x) = 20x + 9$, because $f(n + 1) = f(n) + 20$ when $f(0) = 9$

Ⓒ $f(x) = 20(9^x)$, because $f(n + 1) = 9f(n)$ when $f(0) = 20$

Ⓓ $f(x) = 9(20^x)$, because $f(n + 1) = 20f(n)$ when $f(0) = 9$

11 The function $p(x)$ is defined over all non-negative real numbers. Which of the following functions is defined over a domain that includes negative real numbers?

Ⓐ $g(x) = p(x) + 8$

Ⓑ $g(x) = p(x + 8)$

Ⓒ $g(x) = p(x - 8)$

Ⓓ $g(x) = p(x) - 8$

