Name: **Date:**

Practice: Comparing Functions Using Average Rate of Change B

For problems 1–3, determine the type of function and whether its *a*-value is positive or negative.

1. $f(x) = -\frac{1}{5}x^2 - 3$

2. $f(x) = \frac{18}{5}x$

3. $f(x) = -0.5 \bullet \left(12^x\right)$

For problems 4–8, describe the end behavior of each function.

4. $f(x) = 8 \bullet 3^x$

5. $f(x) = -9(x+1)^2$

6. $f(x) = -\frac{x-12}{5}$

continued

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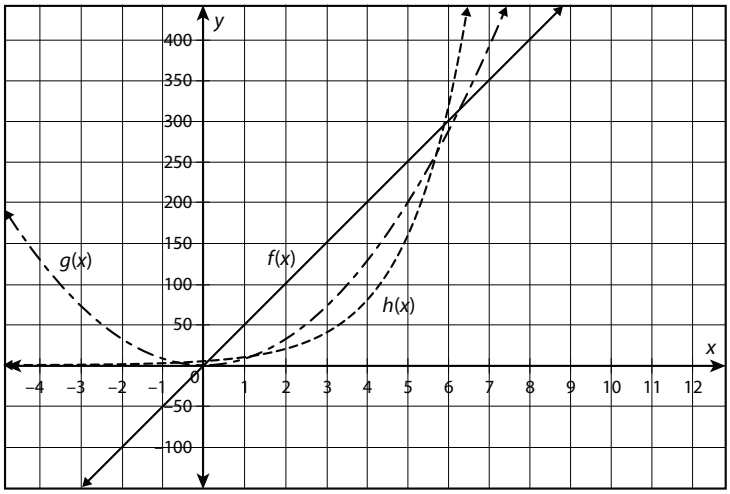
7. $f(x) = (0.228)^{x+1.5}$

8. $f(x) = \dfrac{x^2}{250} + 498$

Use the graph to complete problems 9 and 10.



9. Describe the end behavior of $g(x)$.

10. As the value of x increases, will either $f(x)$ or $g(x)$ surpass $h(x)$? How do you know?