AP Calculus AB
Supplement 2.5
Tabular and Graphical Derivatives

Name _____
Date _____
Period _____

Use the table below to find the derivative of each function at the given x-value.

x	0	1	2	3	4
$f(x)$	3	4	0	5	2
$g(x)$	1	4	3	2	4
$f'(x)$	4	5	1	2	3
$g'(x)$	2	3	4	5	6

1. $y = g(x) + f(x),\ x = 4$

2. $y = f(x) - 2g(x),\ x = 0$

3. $y = f(x) \cdot g(x),\ x = 1$

4. $y = \dfrac{g(x)}{f(x)},\ x = 3$

5. $y = x^2 \cdot g(x),\ x = 3$

6. $y = \dfrac{e^x}{f(x)},\ x = 0$

7. $y = 4f(x^2),\ x = 2$

8. $y = \sqrt{g(x)},\ x = 4$

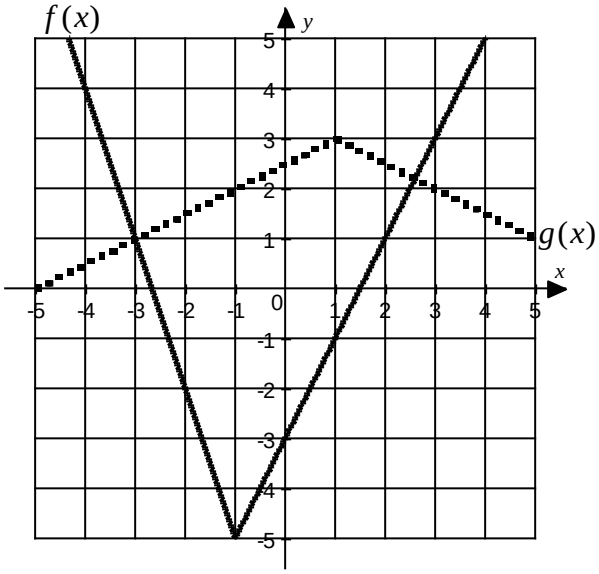
9. $y = \dfrac{f(2x)}{x^3},\ x = 2$

10. $y = f(g(x)),\ x = 4$

11. $y = g(f(5x)),\ x = 0$

12. $y = g(x^2) \cdot (g(x))^2,\ x = 1$

Use the graphs of f (solid) and g (dashed) given at the right to find the derivative of each function at the given x-value.



13. $y = f(x) + g(x),\ x = 0$

14. $y = f(x),\ x = -1$

15. $y = f(x)g(x),\ x = 3$

16. $y = \dfrac{g(x)}{f(x)},\ x = 3$

17. $y = f(g(x)),\ x = -3$

18. $y = f(f(x)),\ x = -4$

Supplement 2.5 Answers

1. $y'(4) = 9$
2. $y'(0) = 0$
3. $y'(1) = 32$
4. $y'(3) = 21/25$
5. $y'(3) = 57$
6. $y'(0) = -1/9$
7. $y'(2) = 48$
8. $y'(4) = 3/2$
9. $y'(2) = 3/8$
10. $y'(4) = 18$
11. $y'(0) = 100$
12. $y'(1) = 192$
13. $y'(0) = 5/2$
14. $y'(-1)$ undefined
15. $y'(3) = 5/2$
16. $y'(3) = -11/18$
17. $y'(-3) = 1$
18. $y'(-4) = -6$