

Math 1513 - College Algebra

Discussion Board Week 5 - Due 2017.07.09

Each of the following functions h can be thought of as a composition of two functions, f and g . Come up with these two functions, and verify that $h = f \circ g$. Note: There may be more than one acceptable answer here.

1. $h(x) = \sqrt{3x - 5} - 2(3x - 5)$
2. $h(x) = \frac{1}{3x - 5} + (3x - 5)^2$
3. $h(x) = 3\sqrt{2x + 1}^3 - 6\sqrt{2x + 1} + 2$
4. $h(x) = \frac{1}{3 + x^2} + \frac{x^2}{3 - x^2}$
5. $h(x) = |3x - 1| + 5$
6. $h(x) = 5(2x - 1)^2 + 3(2x - 1) - 6$
7. $h(x) = 2^{x^2 - 1} + x^2 - 1$
8. $h(x) = \frac{5}{(2x + 1)^2} + 4(2x + 1)^3$
9. $h(x) = (3x + 2)^3 + 3(3x + 2)^2 - 6(3x + 2) + 5$
10. $h(x) = \sqrt{3(x - 1)^2 + 2(x - 1) - 7}$
11. $h(x) = \frac{1}{3x^3} + 5x^3 + 2$
12. $h(x) = 3\sqrt{x^3} - 5\sqrt{x} + \frac{6}{\sqrt{x}} - 1$
13. $h(x) = \sqrt{2 + x - x^2} + 2 + x - x^2$
14. $h(x) = \sqrt{5 + 3x} - 6(5 + 3x) - 1$
15. $h(x) = \frac{1}{x - 5} + (x - 5)^2 + (x - 5) + 2$