

Answer on Question # 42241 – Math – Calculus

Find $(f + g)(x)$.

$f(x) = \sqrt{3x+7}$, $g(x) = \sqrt{3x-7}$

Answer.

1. If there is $(f + g)(x)$ then $(f + g)(x) = f(x) + g(x)$.

$$\text{So } (f + g)(x) = f(x) + g(x) = \sqrt{3x+7} + \sqrt{3x-7}.$$

2. If there is $(f \circ g)(x)$ then $(f \circ g)(x) = f(g(x))$.

$$\text{So } f(x) \circ g(x) = f(g(x)) = \sqrt{3\sqrt{3x-7} + 7}.$$