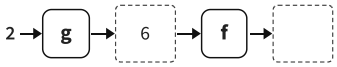
Composite Functions

1

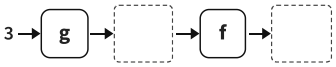
$f(x) = x + 4$ and $g(x) = 3x$. Put 2 into g, then put the output into f.



Answer _____

2

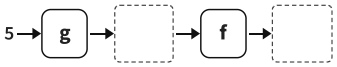
$f(x) = 2x$ and $g(x) = x + 5$. Put 3 into g, then put the output into f.



Answer _____

3

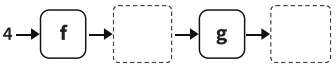
$f(x) = x - 3$ and $g(x) = 4x$. Put 5 into g, then put the output into f.



Answer _____

4

$f(x) = x^2$ and $g(x) = x + 1$. Put 4 into f, then put the output into g.



Answer _____

5

$f(x) = 2x + 1$ and $g(x) = x + 3$. Find fg(2).

g(2) = 5

_____

_____

Answer _____

6

$f(x) = 5x$ and $g(x) = x - 1$. Find fg(4).

_____

_____

Answer _____

7

$f(x) = x + 6$ and $g(x) = 3x$. Find gf(2).

_____

_____

Answer _____

8

$f(x) = x^2$ and $g(x) = 2x - 1$. Find fg(3).

_____

_____

Answer _____

Composite Functions *further practice*

9

$f(x) = 3x - 2$ and $g(x) = x + 4$. Find fg(1).

_____

_____

Answer _____

10

$f(x) = x^2 + 1$ and $g(x) = x - 3$. Find gf(2).

_____

_____

Answer _____

11

$f(x) = 2x$ and $g(x) = x + 7$.
Find fg(3) and gf(3).
Does the order matter?

_____

_____

Answer _____

12

A phone case costs £30. In a sale, $f(x) = x - 4$ takes £4 off and $g(x) = \frac{x}{2}$ halves the price. Find fg(30) and gf(30). Which order is cheaper?

_____

_____

Answer _____

13

$f(x) = 2x + 1$. Find ff(3).

_____

_____

Answer _____

14

A bank takes a £5 fee, $g(x) = x - 5$, then changes pounds to euros, $f(x) = 1.2x$.
Find fg(105). What does it tell you?

_____

_____

Answer _____

15

$f(x) = x + 5$ and $g(x) = 2x$. Find fg(x).

_____

_____

Answer _____

16

$f(x) = 2x$ and $g(x) = x + 5$.
Mia writes: f(4) = 8, g(8) = 13, so fg(4) = 13. Explain her mistake and find fg(4).

_____

_____

Answer _____