|  |  |
| --- | --- |
| **Match-Up** | **Composite Functions** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | $$f\left(x\right)=x+3 g\left(x\right)=2x$$Find $fg(x)$ |  | **A** | $$2x+6$$ |
| **2** | $$f\left(x\right)=10-x g\left(x\right)=3x+1$$Find $gf(x)$ |  | **B** | $$4x-3$$ |
| **3** | $$f\left(x\right)=x+3 g\left(x\right)=2x$$Find $gf(x)$ |  | **C** | $$x^{2}-1$$ |
| **4** | $$f\left(x\right)=2x-1$$Find $ff(x)$ |  | **D** | $$\frac{2x}{2x+1}$$ |
| **5** | $$f\left(x\right)=10-x g\left(x\right)=3x+1$$Find $fg(x)$ |  | **E** | $$x^{2}+2x+1$$ |
| **6** | $$f\left(x\right)=x^{2} g\left(x\right)=x-1$$Find $fg(x)$ |  | **F** | $$2x+3$$ |
| **7** | $$f\left(x\right)=2x g\left(x\right)=\frac{x}{x+1}$$Find $gf(x)$ |  | **G** | $$\frac{2x}{x+1}$$ |
| **8** | $$f\left(x\right)=x^{2} g\left(x\right)=x-1$$Find $gf(x)$ |  | **H** | $$x^{2}-2x+1$$ |
| **9** | $$f\left(x\right)=2x g\left(x\right)=\frac{x}{x+1}$$Find $fg(x)$ |  | **I** | $$31-3x$$ |
| **10** | $$f\left(x\right)=x+2 g\left(x\right)=(x-1)^{2}$$Find $gf(x)$ |  | **J** | $$9-3x$$ |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
|  |  |  |  |  |  |  |  |  |  |