|  |  |
| --- | --- |
| **Match-Up** | **Harder Differentiation** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | $$y=x^{3}+2x^{2}$$ |  | **A** | $$\frac{dy}{dx}=12x^{2}-6x$$ |
| **2** | $$y=2x^{3}+3x$$ |  | **B** | $$\frac{dy}{dx}=4-6x$$ |
| **3** | $$y=3x^{2}-x^{3}$$ |  | **C** | $$\frac{dy}{dx}=4x-6$$ |
| **4** | $$y=x^{4}+2x^{2}-5x$$ |  | **D** | $$\frac{dy}{dx}=3x^{2}-10x+2$$ |
| **5** | $$y=x^{3}+\frac{1}{x}$$ |  | **E** | $$\frac{dy}{dx}=6x-3x^{2}$$ |
| **6** | $$y=8+4x-3x^{2}$$ |  | **F** | $$\frac{dy}{dx}=3x^{2}+4x$$ |
| **7** | $$y=x^{2}(4x-3)$$ |  | **G** | $$\frac{dy}{dx}=9x^{2}+\frac{5}{x^{2}}$$ |
| **8** | $$y=(x+2)(3x-2)$$ |  | **H** | $$\frac{dy}{dx}=4x^{3}+4x-5$$ |
| **9** | $$y=2x^{4}-\frac{1}{x^{2}}$$ |  | **I** | $$\frac{dy}{dx}=6x+4$$ |
| **10** | $$y=(x^{2}+2)(x-5)$$ |  | **J** | $$\frac{dy}{dx}=3x^{2}-\frac{1}{x^{2}}$$ |
| **11** | $$y=\frac{4x^{3}-12x^{2}}{2x}$$ |  | **K** | $$\frac{dy}{dx}=8x^{3}+\frac{2}{x^{3}}$$ |
| **12** | $$y=\frac{6x^{4}-10}{2x}$$ |  | **L** | $$\frac{dy}{dx}=6x^{2}+3$$ |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
|  |  |  |  |  |  |  |  |  |  |  |  |