

<p>1. Differentiate $-\frac{5(1-2x)^4}{2}$ with respect to x.</p>	<p>2. Given $f(x) = -\frac{2}{5(1-2x)^4}$, find $f'(x)$.</p>
<p>3. Find $\frac{d}{dx}[(3x-2)\log_e \pi]$.</p>	<p>4. Find the derivative of $(1+3x)^2\sqrt{1+3x}$.</p>
<p>5. Evaluate $f'(-1)$, given $f(x) = \frac{1}{2}\left(\sqrt[3]{\frac{8}{1-x}}\right)$.</p>	<p>6. Find $\frac{d}{d(x^2)}\left(\frac{\sqrt{a+x^2}}{(a+x^2)^2}\right)$.</p>
<p>7. Differentiate $\frac{2e^{2(3-x)}}{3}$ with respect to x.</p>	<p>8. Given $y = 3 \times 2^{x+1}$, find $\frac{dy}{dx}$.</p>
<p>9. Find $\frac{d}{dx}\log_e\left(\frac{2x-1}{3}\right)$.</p>	<p>10. Given $f(x) = -3\log_{10}(3x)$, find $f'(x)$.</p>
<p>11. Differentiate $2e^{3\log_e\sqrt{x+2}}$ with respect to x.</p>	<p>Numerical, algebraic and worded answers.</p> <ol style="list-style-type: none"> 1. $20(1-2x)^3$ 2. $-16/5(1-2x)^5$ 3. $3\log_e \pi$ 4. $(15/2)(1+3x)^{3/2}$ 5. $1/3(1-x)^{4/3}$ 6. $-3/2(a+x^2)^{5/2}$ 7. $(-4/3)e^{2(3-x)}$ 8. $(3\log_e 2)2^{x+1}$ 9. $2/(2x-1)$ 10. $-3/x\log_e 10$ 11. $3\sqrt{x+2}$