A1. $f(x) = (2x-1)^7;$ $\qquad$ $f'(x) = 7 \cdot (2x-1)^6 \cdot 2$ $\qquad$ $= 14 \cdot (2x-1)^6$

A2. $f(x) = \sqrt{x^2 - 7x};$ $\quad \ldots = (x^2 - 7x)^{\frac{1}{2}};$ $\quad f'(x) = \frac{1}{2}(x^2 - 7x)^{-\frac{1}{2}} \cdot (2x-7)$ $\quad = \dfrac{(2x-7)}{2\sqrt{x^2 - 7x}}$

A3. $f(x) = \dfrac{5}{(3x^2 - 8)^3};$ $\quad \ldots = 5 \cdot (3x^2 - 8)^{-3};$ $\quad f'(x) = 5 \cdot (3x^2 - 8)^{-4} \cdot 6x$ $\quad = \dfrac{30x}{(3x^2 - 8)^4}$

A4. $f(x) = x\sqrt{x};$ $\qquad \ldots = x^{\frac{3}{2}};$ $\qquad f'(x) = \dfrac{3}{2} x^{\frac{1}{2}}$ $\qquad = 1{,}5\sqrt{x}$

A5. $f(x) = \dfrac{9x-2}{\sqrt{x}};$ $\qquad \ldots = \dfrac{9x-2}{x^{\frac{1}{2}}};$ $\qquad f'(x) = \dfrac{9x^{\frac{1}{2}} - \dfrac{1}{2}x^{-\frac{1}{2}}}{x}$ $\qquad = \dfrac{9\sqrt{x} - \dfrac{1}{2\sqrt{x}}}{x}$

A6. $f(x) = 3\sin(4x-3);$ $\qquad f'(x) = 3 \cdot 4 \cdot \cos(4x-3)$ $\qquad = 12 \cdot \cos(4x-3)$

A8. $f(x) = \sqrt{x}\cos(3x-2)$ $\quad \ldots = x^{\frac{1}{2}}\cos(3x-2)$ $\quad f'(x) = \dfrac{1}{2}x^{-\frac{1}{2}} \cdot \cos(3x-2) + x^{\frac{1}{2}} \cdot 3 \cdot (-\sin(3x-2))$ $\quad = \dfrac{\cos(3x-2)}{2\sqrt{x}} - 3 \cdot \sqrt{x}\sin(3x-2)$

A9. $f(x) = \dfrac{\cos 5x}{x}$ $\qquad f'(x) = \dfrac{-5\sin 5x \cdot x - 1 \cdot \cos 5x}{x^2}$ $\qquad = -\dfrac{5\sin 5x \cdot x + \cos 5x}{x^2}$

A10. $f(x) = 5\sin^3 2x$ $\qquad f'(x) = 5 \cdot 3\sin^2 2x \cdot 2 \cdot \cos 2x$ $\qquad = 30 \cdot \sin^2 2x \cdot \cos 2x$

A11. $f(x) = \tan^2 3x$ $\qquad f'(x) = 2 \cdot \tan 3x \cdot \dfrac{1}{\cos^2 3x} \cdot 3$ $\qquad = \dfrac{6 \cdot \tan 3x}{\cos^2 3x}$

A12. $f(x) = 7\ln(2-x)$ $\qquad f'(x) = 7 \cdot \dfrac{1}{2-x} \cdot (-1)$ $\qquad = \dfrac{-7}{2-x} = \dfrac{7}{x-2}$

A13. $f(x) = \dfrac{3}{2x-1}$ $\quad \ldots = 3 \cdot (2x-1)^{-1}$ $\quad f'(x) = 3 \cdot (-1) \cdot (2x-1)^{-2} \cdot 2$ $\quad = \dfrac{-6}{(2x-1)^2}$

A14. $f(x) = \dfrac{5}{6-3x}$ $\quad \ldots = 5 \cdot (6-3x)^{-1}$ $\quad f'(x) = 5 \cdot (-1) \cdot (6-3x)^{-2} \cdot (-3)$ $\quad = \dfrac{15}{(6-3x)^2}$

A15. $f(x) = e^{1-x}$ $\qquad f'(x) = e^{1-x} \cdot (-1)$ $\qquad = -e^{1-x}$

A16. $f(x) = \dfrac{e^{2x}}{\sin 2x}$ $\qquad f'(x) = \dfrac{2e^{2x} \cdot \sin 2x - 2\cos 2x \cdot e^{2x}}{\sin^2 2x}$ $\qquad = \dfrac{2e^{2x}(\sin 2x - \cos 2x)}{\sin^2 2x}$

A17. $f(x) = e^{\cos x}$ $\qquad f'(x) = e^{\cos x} \cdot (-\sin x)$ $\qquad = -e^{\cos x} \cdot \sin x$