



Derivative Rules - Trigonometric Angle with Power (with Rule) to Derivative

1 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \sin(u) = \cos(u) \cdot \frac{du}{dx}$ $f(x) = \sin(x^{-1})$		2 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \cos(u) = -\sin(u) \cdot \frac{du}{dx}$ $f(x) = 2 \cos(x^{-2})$	
A $f'(x) = \cos(x^{-1})$	B $f'(x) = \cos(x^{-1}) \cdot (x^{-1})$	A $f'(x) = 2 \cos(x^{-2}) \cdot (-2x^{-3})$	B $f'(x) = -2 \sin(x^{-2}) \cdot (x^{-2})$
C $f'(x) = \sin(x^{-1}) \cdot (-x^{-2})$	D $f'(x) = \cos(x^{-1}) \cdot (-x^{-2})$	C $f'(x) = -2 \sin(x^{-2})$	D $f'(x) = -2 \sin(x^{-2}) \cdot (-2x^{-3})$
3 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \sin(u) = \cos(u) \cdot \frac{du}{dx}$ $f(x) = 5 \sin(x^{\frac{1}{2}})$		4 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \cos(u) = -\sin(u) \cdot \frac{du}{dx}$ $f(x) = 4 \cos(x^{-1})$	
A $f'(x) = 5 \cos(x^{\frac{1}{2}}) \cdot (x^{\frac{1}{2}})$	B $f'(x) = 5 \cos(x^{\frac{1}{2}}) \cdot \frac{1}{2} x^{-\frac{1}{2}}$	A $f'(x) = 4 \cos(x^{-1}) \cdot (-x^{-2})$	B $f'(x) = -4 \sin(x^{-1})$
C $f'(x) = 5 \cos(x^{\frac{1}{2}})$	D $f'(x) = 5 \sin(x^{\frac{1}{2}}) \cdot \frac{1}{2} x^{-\frac{1}{2}}$	C $f'(x) = -4 \sin(x^{-1}) \cdot (-x^{-2})$	D $f'(x) = -4 \sin(x^{-1}) \cdot (x^{-1})$
5 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \cos(u) = -\sin(u) \cdot \frac{du}{dx}$ $f(x) = 4 \cos(x^{-2})$		6 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \cos(u) = -\sin(u) \cdot \frac{du}{dx}$ $f(x) = 2 \cos(x^{-1})$	
A $f'(x) = -4 \sin(x^{-2}) \cdot (-2x^{-3})$	B $f'(x) = 4 \cos(x^{-2}) \cdot (-2x^{-3})$	A $f'(x) = -2 \sin(x^{-1}) \cdot (-x^{-2})$	B $f'(x) = -2 \sin(x^{-1}) \cdot (x^{-1})$
C $f'(x) = -4 \sin(x^{-2})$	D $f'(x) = -4 \sin(x^{-2}) \cdot (x^{-2})$	C $f'(x) = -2 \sin(x^{-1})$	D $f'(x) = 2 \cos(x^{-1}) \cdot (-x^{-2})$
7 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \sin(u) = \cos(u) \cdot \frac{du}{dx}$ $f(x) = 3 \sin(x^3)$		8 Find the derivative $f'(x)$ using the trigonometric rules and the chain rule. $\frac{d}{dx} \sin(u) = \cos(u) \cdot \frac{du}{dx}$ $f(x) = \sin(x^{\frac{1}{2}})$	
A $f'(x) = 3 \sin(x^3) \cdot 3x^2$	B $f'(x) = 3 \cos(x^3) \cdot 3x^2$	A $f'(x) = \cos(x^{\frac{1}{2}})$	B $f'(x) = \cos(x^{\frac{1}{2}}) \cdot \frac{1}{2} x^{-\frac{1}{2}}$
C $f'(x) = 3 \cos(x^3)$	D $f'(x) = 3 \cos(x^3) \cdot (x^3)$	C $f'(x) = \sin(x^{\frac{1}{2}}) \cdot \frac{1}{2} x^{-\frac{1}{2}}$	D $f'(x) = \cos(x^{\frac{1}{2}}) \cdot (x^{\frac{1}{2}})$