Antiderivative Block (Calculus)

Learning Goal: Practice with derivatives and antiderivatives and being careful to pay attention to which direction you are going. This is a (ideally) a two-player game.

Game Setup: There is a gameboard, a set of game tiles, and two sets of player ID cards (one set is X, one set is =). It is very important that the two game tile pages get printed back to back on **cardstock** so that when it is cut out, you might see correct pairs as the front and back of a card. The player cards (= or x) should NOT be printed double sided.

Find the derivative.	Find an antiderivative.
$\sin x$	$\cos x$

1. Place all the game tiles on the gameboard (see note about levels below).
2. Players take turns declaring the answer for a card, then checking it. If they are correct, they get to stake a claim on the space. If they are incorrect, their opponent gets to claim the space.
3. The goal is to place four player ID cards on the board in a row, column, or on a diagonal.

Level 1: Place game tiles "derivative side" up.
Level 2: Place game tiles "antiderivative side" up.
Level 3: Place game tiles so that they are mixed, some derivative, some antiderivative sides up.

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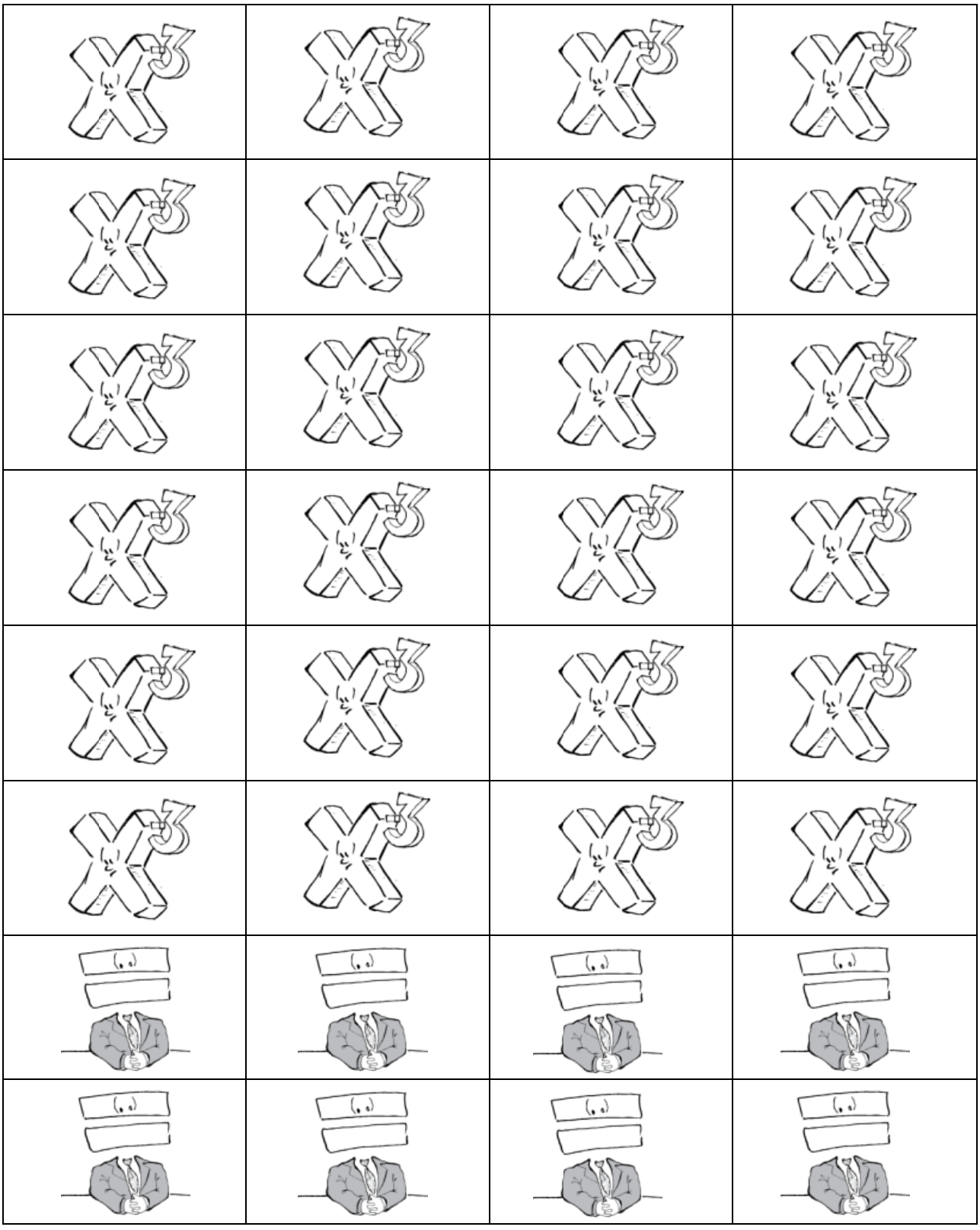

Find the derivative. $\sin x$	Find the derivative. $\cos x$	Find the derivative. $\tan x$	Find the derivative. $-\cos x$
Find the derivative. $\csc x$	Find the derivative. $\sec x$	Find the derivative. $\cot x$	Find the derivative. $-\sin x$
Find the derivative. x^3	Find the derivative. x^5	Find the derivative. x^2	Find the derivative. $2x$
Find the derivative. $\frac{x^2}{2}$	Find the derivative. $\frac{x^4}{4}$	Find the derivative. $\frac{x^3}{3}$	Find the derivative. $\frac{x^5}{5}$
Find the derivative. e^x	Find the derivative. 2^x	Find the derivative. 10^x	Find the derivative. $\ln x$
Find the derivative. $\frac{e^{2x}}{2}$	Find the derivative. $\frac{1}{2}\sin 2x$	Find the derivative. $\frac{1}{3}\tan 3x$	Find the derivative. $\frac{1}{4}\cos 4x$
Find the derivative. e^{2x}	Find the derivative. $\sin 3x$	Find the derivative. $\tan 4x$	Find the derivative. $\cos 2x$
Find the derivative. $(x+3)^4$	Find the derivative. $(2x+1)^3$	Find the derivative. $\sin(x^2)$	Find the derivative. $\sin^2 x$
Find the derivative. $x^{1/2}$	Find the derivative. x^{-2}	Find the derivative. $\frac{2}{3}x^{3/2}$	Find the derivative. $\frac{x^{-2}}{-2}$

Find an antiderivative. $\sin x$	Find an antiderivative. $\sec^2 x$	Find an antiderivative. $-\sin x$	Find an antiderivative. $\cos x$
Find an antiderivative. $-\cos x$	Find an antiderivative. $-\csc^2 x$	Find an antiderivative. $\sec x \tan x$	Find an antiderivative. $-\csc x \cot x$
Find an antiderivative. 2	Find an antiderivative. $2x$	Find an antiderivative. $5x^4$	Find an antiderivative. $3x^2$
Find an antiderivative. x^4	Find an antiderivative. x^2	Find an antiderivative. x^3	Find an antiderivative. x
Find an antiderivative. $\frac{1}{x},\ x>0$	Find an antiderivative. $10^x \ln 10$	Find an antiderivative. $2^x \ln 2$	Find an antiderivative. e^x
Find an antiderivative. $-\sin 4x$	Find an antiderivative. $\sec^2 3x$	Find an antiderivative. $\cos 2x$	Find an antiderivative. e^{2x}
Find an antiderivative. $-2\sin 2x$	Find an antiderivative. $4\sec^2 4x$	Find an antiderivative. $3\cos 3x$	Find an antiderivative. $2e^{2x}$
Find an antiderivative. $2\sin x \cos x$	Find an antiderivative. $2x\cos\left(x^2\right)$	Find an antiderivative. $6\left(2x+1\right)^2$	Find an antiderivative. $4\left(x+3\right)^3$
Find an antiderivative. x^{-3}	Find an antiderivative. $x^{1/2}$	Find an antiderivative. $-2x^{-3}$	Find an antiderivative. $\frac{1}{2}x^{-1/2}$

Antiderivative Block Game Board