

Texas Instruments Activity #5

Title: Integration Crossing

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Estimated Time: 40-50 Minutes

NCTM Standards:

Communication Standard – Organize and consolidate their mathematical thinking through communication.

Connections Standard – Recognize and apply mathematics in contexts outside of mathematics.

Algebra Standard – Understand patterns, relations, and functions. Approximate and interpret rates of change from graphical and numerical data.

Topics in Calculus:

Derivatives and Anti-Derivatives

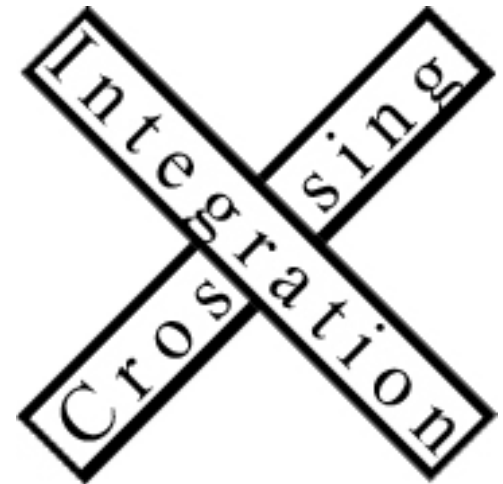
Overview:

This worksheet allows the students the opportunity to learn to how to use the TI-89 to compute derivatives and anti-derivatives.

Supplies: TI-89 Graphing Calculator

Name: _____ Date: _____

Using the TI-89 Graphing Calculator, solve each of the clues to fill in the crossword puzzle below. Write the solutions in the crossword puzzle as it appears on the calculator screen. The first three have been done for you. Follow the format in which the samples were created. Use the letters in the gray boxes to finish the word at the bottom of the page.



Down

1. $\int 12g^2 + 6g - 2dg$
2. $\int 16\sin(4x)dx$
3. $\int 6e^{3x} dx$
4. $\int 32dk$
5. $\int 12e^{3x} + 8\cos(2x) + 6x^5 dx$
6. $\int 2\sin(a) + 1da$
7. $\int 480n^3 dn$
8. $\int \ln(x) + 2x dx$
9. $\int 12\sin(8t) - 16(\cos 8t) dt$
10. $\int 5t^4 + \cos(2t) + e^t dt$

Across

1. $\int 120z^2 dz$
2. $\int \left(\frac{2\ln(o)}{o} \right) do + \int (2o + 2) do$
3. $\int 2e^{2a} da$
4. $\int \cos(r) + e^r dr$ (In reverse)
5. $\int 9k^2 + \sin k + 1dk$ (Out of Order)
6. $\int 5 + 240t^9 dt$ (Factor)
7. $\int 6x - 23dx$ (Factor)
8. $\int (84t^3) dt + 3$
9. $\int 4e^{2x} dx + 4$
10. $\int 12x^5 + 2dx + 1$ (Backwards)
11. $\int 1 + 6t^2 dt$ (The way it was entered in the calculator.)

