



INTEGRATION MAZE TASK CARDS ACTIVITY

Your AP Calculus students will have 18 task cards with QR Codes to self-check and a fun maze for review of both indefinite and definite integrals.

This engaging activity is designed to help your Calculus students with their unit review of **Integration** techniques.

About the resource:

1. There is a **Maze Activity** with a student recording sheet,
2. **18 task cards** with **QR Codes**, and
3. a **practice/review** assignment.

The maze and task cards are definite integral questions and cover polynomial, trigonometric, and transcendental functions. The extra assignment contains 16 questions, 11 are indefinite integrals and 5 are definite integrals.



INTEGRATION MAZE . . . DEFINITELY Show work here.

Name _____

INTEGRATION MAZE . . . DEFINITELY

Directions: Find the solution to each definite integral and solve the maze. SHOW YOUR WORK!

START:

A $\int_{\pi/2}^{5\pi/4} \sin x \, dx$ $\frac{\sqrt{2}}{2}$ **B** $\int_1^4 \frac{u-2}{\sqrt{u}} \, du$ $\frac{2}{3}$ **C** $\int_4^7 \frac{1}{x-2} \, dx$ $\ln 7$ **D** $\int_{-2}^2 3^x \, dx$

$-\frac{\sqrt{2}}{2}$ $-\sqrt{2}$ -6 $\ln\left(\frac{5}{2}\right)$ $4 \ln 3$ $\frac{4}{\ln 3}$

E $\int_{-1}^2 2^x \, dx$ $\frac{\pi}{4}$ **F** $\int_0^1 \frac{dx}{1+x^2}$ $\ln 3$ **G** $\int_e^{e^3} \frac{dx}{x \ln x}$ -1 $\int_0^{\pi/4} \sin 2\theta \, d\theta$

$\frac{7}{2 \ln 2}$ $\tan^{-1} \pi$ $\frac{3\sqrt{3}}{2}$ 1

$\frac{2}{3}$ $\frac{1}{3}$ $\frac{2}{3}$ $\frac{1}{3}$

N $\int_0^{\pi/2} \frac{1}{\sqrt{9-\lambda}} \, d\lambda$ **P** $\int_0^5 \frac{\cos \theta}{1+2 \sin \theta} \, d\theta$ **R**

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N

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P

R

YEAH!



PREVIEW

1 $\int_4^9 \frac{x-3}{\sqrt{x}} dx$

2 $\int_0^3 x\sqrt{9-x^2} dx$

3 $\int_0^{\sqrt{\pi}} x(\sin x^2) dx$

4 $\int_1^9 \sqrt{2x+7} dx$

5 $\int_0^{\pi/2} \cos x \sin x dx$

6 $\int_1^4 \frac{x}{x^2} dx$

7 $\int_1^4 \frac{x^2+3x+1}{x} dx$

8 $\int_0^{\pi/3} \frac{2^x}{x+1} dx$

9 $\int_1^4 \sqrt[3]{x} dx$

10 $\int_0^{\ln 2} \frac{2e^x}{1+e^x} dx$

11 $\int_0^{\pi/4} \sqrt{\tan x} (\sec^2 x) dx$

12 $\int_0^4 |9-x^2| dx$

13 $\int_0^{\pi/2} \frac{1}{1+\cos x} dx$

14 $\int_0^{\pi/2} \frac{-\sin x}{x+\cos x} dx$

15 $\int_0^{\pi/2} \frac{1}{1+\cos x} dx$

16 $\int_0^{\pi/2} \frac{-\sin x}{x+\cos x} dx$

17 $\int_0^{\pi/2} \frac{1}{1+\cos x} dx$

18 $\int_0^{\pi/2} \frac{-\sin x}{x+\cos x} dx$

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CALCULUS
ANTIDERIVATIVES
Evaluate the integrals.

Name _____

1. $\int \frac{2x^2 - x + 3}{\sqrt{x}} dx$

2. $\int \left(t - \frac{1}{t}\right)^2 dt$

3. $\int \frac{(\sqrt{x}+2)^2}{x^3} dx$

4. $\int (\sqrt[3]{x^2} - \sin x) dx$

5. $\int \frac{(\sqrt{x}+2)^4}{\sqrt{x}} dx$

6. $\int \frac{1}{\theta} d\theta$

7. $\int \frac{\cos x}{-\sin x)^2} dx$

9. $\int x^2 e^{3x^3} dx$

10. $\int \frac{e^x}{1+e^{2x}} dx$

11. $\int \frac{1}{x^2} dx$

12. $\int_{-1}^5 |2-x| dx$

13. $\int \frac{1}{9} dx$

14. $\int_0^{\pi/2} \cos x dx$

15. $\int_1^9 \frac{x-4}{\sqrt{x}} dx$

16. $\int_2^3 \frac{x^3}{x^4-5} dx$

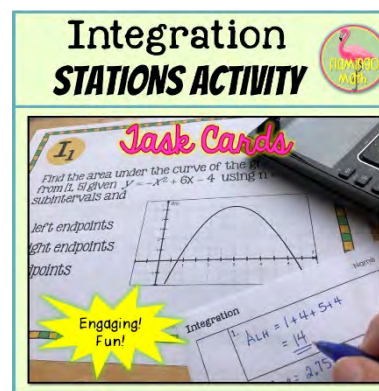
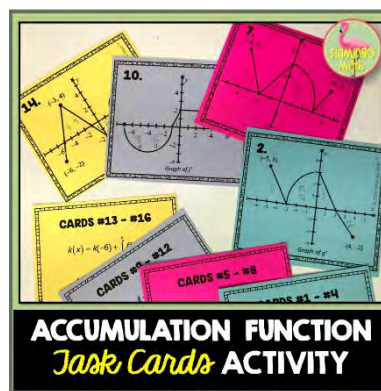
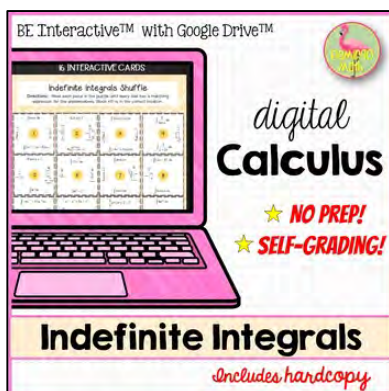




My goal is to help you bring balance into your teacher life by providing relevant content, engaging activities, and comprehensive assessments for your high-stakes math course.



More Resources for YOU



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