

MATH 105 Quiz # 4 Monday Feb 29, 2016
(4 questions, two sides, 15 minutes)

FAMILY NAME:
STUDENT NUMBER:

Work must be shown for full marks.

1. Compute the indefinite integral

$$\int \frac{x - 13}{x^2 - x - 6} dx$$

2. Compute

$$\frac{d}{dx} \int_2^{x^2} e^{t^2} dt$$

3. Compute the indefinite integral

$$\int \tan(x) \sec^2(x) dx$$

4. Compute the indefinite integral

$$\int \sqrt{3 - 2x - x^2} \, dx$$

You may recall $\cos^2(\theta) = (1 + \cos(2\theta))/2$ and $\sin^2(\theta) = (1 - \cos(2\theta))/2$.

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(4 questions, two sides, 15 minutes)

FAMILY NAME:
STUDENT NUMBER:

Work must be shown for full marks.

1. Compute the indefinite integral

$$\int \frac{2x - 1}{x^2 - x - 6} dx$$

2. Compute

$$\frac{d}{dx} \int_2^{x^3} e^{t^2} dt$$

3. Compute the indefinite integral

$$\int x \cos(x) dx$$

4. Compute the indefinite integral

$$\int \sqrt{3 - 2x - x^2} \, dx$$

You may recall $\cos^2(\theta) = (1 + \cos(2\theta))/2$ and $\sin^2(\theta) = (1 - \cos(2\theta))/2$.