

Each problem is worth 0 points. In the event of an actual quiz, you would have received warning.

Evaluate the following integrals:

1.  $\int \sin^3 \theta \cos^2 \theta d\theta$

Hint: Let  $u = \cos \theta$ .

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

Hint: Let  $u = x^2$ .

3.  $\int \frac{\sqrt{x+4}}{x} dx$

Hint: Let  $u = \sqrt{x+4}$ .

4.  $\int \frac{1}{\sqrt{x} - \sqrt[3]{x}} dx$

Hint: Let  $u = \sqrt[6]{x}$ .

5.  $\int \tan^3 t \cos^2 t dt$

Hint: Rewrite in sin and cos.

6.  $\int \frac{x}{x^4 + 1} dx$

Hint: Let  $u = x^2$

7.  $\int x \csc x \cot x dx$

Hint: Parts.

8.  $\int \frac{x-1}{x^2 - 4x - 5} dx$

Hint: Partial Fractions.

9.  $\int \pi d\theta$

Hint: Easy.

10.  $\int \tan^3 x \sec^2 x dx$

Hint: Let  $u = \tan x$ .

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

Hint: Divide.

12.  $\int x \arccos x dx$

Hint: Parts.

