

CHAPTER 7.5: Integral Review

1. 'Easier' type:

$$\int \tan^3(x) \sec(x) dx$$

$$\int x^2 \ln(x) dx$$

$$\int x\sqrt{5-x^2} dx$$

2. 'Medium' difficulty:

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

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

3. 'Harder' difficulty:

$$\int y^2(\ln(y))^2 dy$$

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

$$\int \frac{\cos(x)}{4-\sin^2(x)} dx$$

$$\int \frac{x^2}{\sqrt{x+2}} dx$$

$$\int \frac{\tan^{-1}(\sqrt{t})}{\sqrt{t}} dt$$

$$\int \frac{\ln(\tan(\theta))}{\sin(\theta)\cos(\theta)} d\theta$$