

### Questions for recitation 20 January 2021

1.  $\int \sin(4x) \cos(5x) dx$
2.  $\int \tan^3 x dx$ .
3. Find  $\int (\sin x + \cos x)^2 dx$
4. Find  $\int \cos^4(2t) dt$
5. Find  $\int_{\pi}^{2\pi} \cos^3\left(\frac{\theta}{2}\right) \sin^5\left(\frac{\theta}{2}\right) d\theta$
6. Find  $\int (3 - 6 \sin^2 x + 3 \sin^4 x) dx$
7. Find  $\int \frac{\sec^4(2t)}{\tan^9(2t)} dt$
8. Find  $\int \frac{3 + \sin^3 x}{\cos^2 x} dx$
9. Find  $\int \cos(8t) \sin(t) dt$ , in as simple a form as possible
10. Find  $\int_0^{\pi/8} \sin(6x) \sin(2x) dx$