

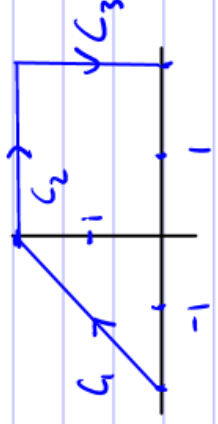
Panel 14

Homework

① Find a parametrization of the following curves:



$$C = C_1 + C_2$$



$$C = C_1 + C_2 + C_3$$

② Find $\int_C z^2 dz$, C is upper half of unit circle, pos. orient.

③ Find $\int_C z^2 dz$, C is line segment from -1 to $1+i$

④ Find $\int_C e^z dz$, C is line from 1 to $1+i$

⇒

Panel 15

HW - continued

⑤ Let $C_r^+(a)$ be the circle, radius r , centered at a , oriented counter clockwise, $C_r^-(a)$ the same circle, but oriented clockwise.

$$a) \int_{C_4^+(0)} z \, dz \quad b) \int_{C_4^+(0)} \bar{z} \, dz$$

$$c) \int_{C_2^-(0)} \sqrt{z} \, dz \quad d) \int_{C_2^-(0)} \sqrt{\bar{z}} \, dz$$

⑥ Find

$$a) \int_{C_R^+(z_0)} \frac{1}{z - z_0} \, dz \quad b) \int_{C_R^+(z_0)} \frac{1}{(z - z_0)^n} \, dz, \quad n > 1$$

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