

# 電 210 電気数学 IV

## 第 6 回

### 整級数, 初等関数 (1)

#### 演習 6-1 解答 (1)

$$c_0 = \boxed{1}, c_1 = \boxed{1}, \dots, c_n = \boxed{1}, c_{n+1} = \boxed{1},$$
$$\frac{c_n}{c_{n+1}} = \frac{\boxed{1}}{\boxed{1}} = \boxed{1}, \lim_{n \rightarrow \infty} \frac{c_n}{c_{n+1}} = \boxed{1}, r = \boxed{1}.$$
$$(1-z)f(z) = \boxed{1}, f(z) = \frac{\boxed{1}}{\boxed{1-z}}.$$

#### 演習 6-1 解答 (2)

$$c_0 = \frac{\boxed{1}}{\boxed{0!}}, c_1 = \frac{\boxed{1}}{\boxed{1!}}, \dots,$$
$$c_n = \frac{\boxed{1}}{\boxed{n!}}, c_{n+1} = \frac{\boxed{1}}{\boxed{(n+1)!}},$$
$$\frac{c_n}{c_{n+1}} = \frac{\boxed{(n+1)!}}{\boxed{n!}} = \boxed{n+1},$$
$$\lim_{n \rightarrow \infty} \frac{c_n}{c_{n+1}} = \boxed{\infty}, r = \boxed{\infty}.$$

#### 演習 6-2 解答

$$e^{i(i)} = e^{\boxed{-1}}, e^{i(-i)} = e^{\boxed{1}},$$
$$\cos i = \frac{e^{i(i)} + e^{-i(i)}}{2} = \frac{\boxed{e^{-1} + e}}{2}$$