

# Math 288X — Assignment 5

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Due 2023/10/23 3pm in class or by email

Recall that the  $\mathbb{C}$ -algebra of holomorphic modular forms of level 1 and even weight at least 4 is generated by the Eisenstein series  $E_4$  and  $E_6$ .

1. Express  $\sigma_7(n)$  as a linear combination of values of  $\sigma_3$ .
2. Write  $E_{12}$  in terms of  $E_4$  and  $E_6$ .