

Jacob McLane

HW 10

10/17/21

(1.)

① [1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139]

$$\beta.) 3003 = 3 \cdot 1001$$

$$= 3003 = \boxed{3 \cdot 11 \cdot 13 \cdot 7}$$

$$\hookrightarrow 1001 \div 11 = 91$$

$$\hookrightarrow 91 = 13 \cdot 7$$

$$(4) \pi(n) \approx \frac{n}{\ln(n)} \quad \frac{e^{100}}{e^{100}} = \boxed{\frac{e^{100}}{100}}$$
$$e^{100} = \pi(e^{100}) \approx \ln(e^{100})$$