

P. 544 #4.

$B(n, p)$

$X$  = weight of a box

$$X \sim N(551.3, 225)$$

↑ mean      ↑ variance ( $\sigma^2$ )

parameters of the normal distribution

$$P(X > 550) = P(Z > -0.08\bar{6}) = \underline{\underline{0.535}}$$

$$Z = \frac{550 - 551.3}{15} = -0.08\bar{6}$$

normalcdf(-0.086666, 9)

(b) Out of 1000 boxes, how many will have less than 540 g?

$$Z = \frac{540 - 551.3}{15} = -0.75\bar{3}$$

$$P(Z < -0.75\bar{3}) = 0.226$$

$$\text{normalcdf}(-9, -0.753333)$$

$$(0.226)(1000) = 226 \text{ boxes}$$

HW 15J # 1 - 3, 5