1) True, because the mean is the center and the median divides the data in half, since the normal distribution is always equal to 1, they'd be the same

2) B

3) B

4) $Z \sim (0,1)$

$$P(Z < 2 \mid Z > 0) = \frac{P(Z<2) \text{ and } P(Z>0)}{P(Z>0)}$$

pnorm(0) = 0.5

pnorm(2) = 0.9772

$$\text{so, } \frac{P(Z<2) \text{ and } P(Z>0)}{P(Z>0)}$$

$$= \frac{0.9772 - 0.5}{0.5}$$

$$= 0.9544$$

5) mean = 20,000 avg profit = 18,000 for n = 2

sd = 4,000

$P(\text{Oct+Nov} > 36,000)$ -

$$\frac{P(18,000-20,000)}{4,000/\sqrt{2}} = \frac{-2000}{2828.43} = -0.7071$$

$$= P(Z > -0.7071)$$

$$= 0.7602$$