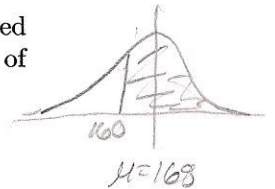


14) The heights of male students at a university are normally distributed with a mean of 168 cm and a standard deviation of 4 cm. What percentage of male students are taller than 160 cm?

$$\text{normcdf}(160, 1599, 168, 4) = .977$$

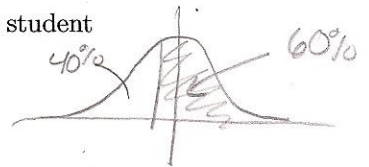
$$97.7\%$$



15) Given the information in problem 14, what is the shortest a male student can be to be in the tallest 60% of students?

$$X = \text{invnorm}(.4, 168, 4)$$

$$X = 167 \text{ cm}$$



16) People are observed eating french fries. The the mean number eaten is 28 and the standard deviation is 4 french fries, what is the minimum probability that a person from this group eats between 22 and 34 french fries?

Chebyshev's Inequality

$$P(22 \leq X \leq 34) \geq 1 - \frac{1}{k^2}$$

$$22 = 28 + 4h$$

$$4h = 6$$

$$h = 3/2$$

$$34 = 28 + 4h$$

$$6 = 4h$$

$$h = 3/2 \checkmark$$

$$1 - \frac{1}{h^2} = 1 - \frac{1}{(3/2)^2} = 1 - \frac{4}{9} = \frac{5}{9}$$