16. A certain amount is invested 5 years and 6 months ago at an interest rate of 8%compounded semi – annually. The accrued amount now is P 347,054. How much was the amount invested?

Solution:

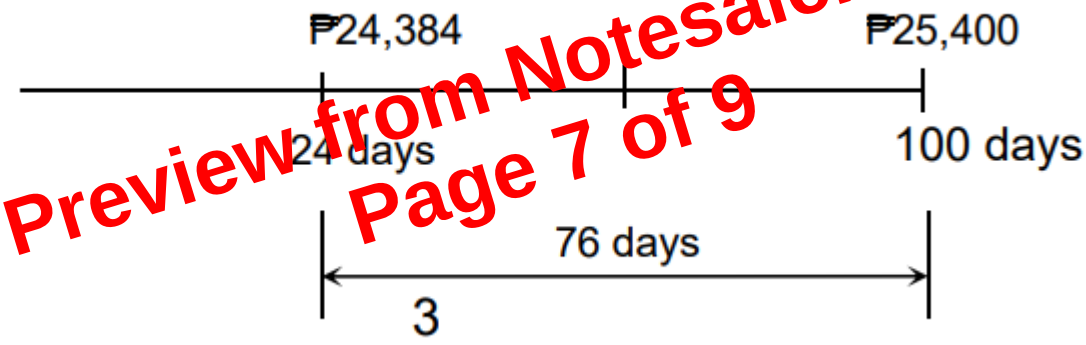
$$P = F\left(1+\frac{r}{n}\right)^{-nt}$$

$$P = 347{,}054\left(1+\frac{0.08}{2}\right)^{-2(5.5)}$$

P =₱ 225,440

17. A bill for a cellphone specifies the cost as P 25,400 due at the end of 100 days but offers a 4% discount for cash in 24 days. What is the highest simple interest rate at which the buyer can afford to borrow money in order to take advantage of the discount?

Solution:



Amount paid in 30 days = 25,400 – 25,400(0.04) = ₱24,384.

$$F = P(1 + rt)$$

$$25{,}400 = 24{,}384\left(1+r\left(\frac{76}{360}\right)\right)$$

$$r = 0.1974$$

r = 19.74 %