21) If the APR is 12% on a credit card with monthly compounding, what is the EAR?

A) 1%
B) 12.68%
C) 13.14%
D) 10.30%

$((1+r)^n - 1) \times 10$

$$EAR = \left[1 + \frac{r}{m}\right)^m - 1$$

$$= \left[1 + \frac{12\%}{12}\right]^{12} - 1$$

$$= 12.68\%$$

23) Your car loan of 60,000 Riyals will be paid in 164 weekly payments (52 weeks in a year) if the interest rate on this loan is 8%
AR, how much is the weekly payment?
A) 213.36
B) 439.10
C) 342.77
D) 188.28

$$r = (1 + r)^{\frac{1}{m}} - 1$$

$$= (1 + 8\%)^{\frac{1}{52}} - 1$$

$$= 0.148$$

PV = 60,000

PMT = ?

N = 164

FV = ??

I/Y = 0.148

24) Khaled did take a loan last year to buy a car, the loan amount was 40,000 Riyals and the monthly payment was 811.06 Riyals the interest rate was 8% APR and the loan was for 5 years. Now after 1 year, Khaled decided to sell the car and pay off the loan how much will Khaled pay to pay off the loan?

A) 40,000.00
B) 9,323.77
C) 21,530.19
D) 33,222.57

PV = 40 000 N = 5 - 1 = 4
FV = 2nd
PMT
I/Y = 8

$((1+8\%)^{4}-1)\times 100 = 36.048896$ ① I/Y =

5 ÷ 12 =

N = 5 - 1 = 4
PMT = 811.06
PV = 40 000
I/y = 8%

$$r = \frac{8\%}{12} \times 100 = 0.667$$

$$N = 4 \times 12 = 48$$

$$PMT = 811.06$$

$$PV = 40{,}000$$

$$PMT \times \frac{1-(1+r)^{-n}}{r}$$

$$811.06 \times \frac{1-\left(1+\frac{8\%}{12}\right)^{-48}}{}$$

$$= 33\,222.56$$

toward the Principal and 177.60 toward the interest FV→? 10th 179 = 1.4456 24923

26) AL Rajhi Bank is offering a 6% APR on your deposit with monthly compounding, if you deposit 10,000 today and you don't make any additional deposit how much will you have in your account after 10 years?

A) 12,506
B) 23,432
C) 18,194
D) 16,703

I/y: 6% monthly 10,000 PV FV=? 17908,4776≈
PMT=0 N=10 ✓ 1819.4

$r = \frac{6\%}{12} = 0.5\%$

$N = 12 \times 10 = 120$

$FV = ?$

$PV = -10{,}000$

$PMT = 0$

27) A zero-coupon bond with 5 years remaining until maturity is trading at 630 Riyals if the face value was 1000 Riyals, what is the Bond yield to maturity (YTM)?

A) 10.4%
B) 8.3%
C) 6.5%
D) 9.7%

N = 5
PV = 630
FV = 1000
PMT = 0

I/Y = ?

9.6811 ≈ 9.7

YTM

I/Y

PV = 630

FV = 1000

N = 5

PMT = 0

28) The YTM of a one-year treasury note (Government Bond) is 3.20%, If a corporate bond with the same duration has a 4.70% YTM what is the credit spread for this corporation Bond?

(A) 1.50%
B) 3.20%
C) 4.70%
D) 7.90%

coupon = 4.70 Put

I/y =

credit spread

= YTM Corp − YTM Treasury

= 4.70 − 3.20

= 1.50

29) STC just issued a 5 years Bond with a yield to maturity (YTM) equal to 8.20% APR and the face value was 1000 Riyals, if this bond pays a Quarterly coupon payment with a coupon rate equal to 7% APR, what is the price for this Bond?

A) 1030.70
B) 923.65
C) 951.18
D) 990.34

I/Y=1.2 N=5 8.20% FV=1000 PV=?

FV= PMT=0
PV=
N=
I/Y=8.20

$N = 5 \times 4 = 20$

$Fv = 1000$

$I/Y = \frac{8.20}{4} = 2.05$

17.5

$PV = ??$

$PMT = ??$

30) A zero-coupon Bond with 10 years remaining until maturity and a face value equal to 1000 Riyals due to the worsening economic situation Its Yield to maturity (YTM) increases from 7% to 10%, what will happen to this Bond price?

A) The price will increase by 122.81 Riyals
B) The price will decrease by 122.81 Riyals
C) The price will increase by 67.14 Riyals
D) The price will decrease by 67.14 Riyals

N = 10
FV = 1000

PMT = 0

N = 10

FV = 1000
508.35
7%
I/Y
10%
385.54

= 122.81

VIP

Suppose you own a business and you expect to generate a profit of $50,000 next year. Each year after that you expect your profit to grow by 4%. If you earn profits for 10 years total and the discount rate is 8%, what is your company's valuation today (present value).

$$\text{adjusted } r = \left(\frac{1 + \text{Discount rate}}{1 + \text{Growth rate}} \right) - 1$$

$$\frac{1 + 8\%}{1 + 4\%} - 1$$

$$= 3.846\%$$

$$PMT = \frac{\text{Next year Profit}}{1+9}$$

$$= \frac{50,000}{1+4\%}$$

$$= 48076.92$$

PV = ?

PMT = 48076.92

I/y = 3.846

N = 10

FV = 0

PV = 392953.61