

8.1.4

①

Gr 8 Wiskunde / Mathematics

Finansies / Finance (2)

1. BTW / VAT
15 %

a) BTW uitgesluit / Excluding VAT

NB $\boxed{R...} \times \frac{115}{100}$

Bv. 'n Boek kos R200, BTW uitgesluit. Hoeveel sal die boek wees met BTW ingesluit?

A book costs R200, excluding VAT. Determine the price of the book, including VAT.

NB $R200 \times \frac{115}{100}$
 $= \underline{R230}$

Bedrag BTW = $230 - 200$
Amount VAT = $\underline{R30}$

b) BTW ingesluit / VAT included

NB $\boxed{R...} \times \frac{100}{115}$

Bv 'n Boek kos R200, BTW ingesluit. Bereken die prys van die boek, voor BTW?

A book costs R200, including VAT. Calculate the price before VAT was added.

NB $R200 \times \frac{100}{115}$
 $= R173,9130435$
 $= \underline{R173,91}$

Bedrag BTW = $200 - 173,91$
Amount VAT = $\underline{R26,09}$

2. Enkelvoudige Rente / Simple Interest

$$\text{Eindbedrag} \leftarrow A = P(1 + i \times n)$$

Final amount

Begin bedrag
Initial / starting amount

tydperk (jare)
time (years)

rente koers $\frac{\%}{100}$
interest rate

a) R400 000 word vir 5 jaar belê teen 'n enkelvoudige rentekoers van 9% per jaar. Bereken die bedrag in die rekening na die 5 jaar.

R400 000 is invested for 5 years at a simple interest rate of 9% per year. Calculate the amount in the account after 5 years.

$$A = P(1 + i \times n)$$

$$A = 400\,000 \left(1 + \frac{9}{100} \times 5\right)$$

$$A = 580\,000$$

$$\therefore \underline{R580\,000}$$

$$A = ?$$

$$P = 400\,000$$

$$i = 9\% = \frac{9}{100}$$

$$n = 5 \text{ jr / yrs}$$

b) 'n Bedrag word vir 10 jaar belê teen 12% enkelvoudige rente per jaar. As daar aan die einde R850 000 in die rekening is, hoeveel het jy belê?

An amount is invested for 10 years @ 12% simple interest per year. If the amount grew to R850 000 in 10 years, how much did you invest?

$$A = P(1 + i \times n)$$

$$\frac{850\,000}{\left(1 + \frac{12}{100} \times 10\right)} = \frac{P \left(1 + \frac{12}{100} \times 10\right)}{\left(1 + \frac{12}{100} \times 10\right)}$$

Kry P alleen
Get P alone

$$386\,363,6364 = P$$

$$\therefore \underline{P = R386\,363,64}$$

$$A = 850\,000$$

$$P = ?$$

$$i = 12\% = \frac{12}{100}$$

$$n = 10 \text{ jr / yrs}$$

③

3. Huurkoop / Hire purchase

↳ Enkelvoudige rente ↳ Simple interest

1. Deposito / Deposit $\boxed{R...} \times \frac{\%}{100}$

2. Oorblywende bedrag / Remaining amount
 $\boxed{R...} - \text{dep.}$

3. Rente op oorblywend / Interest on remaining

$$A = P(1 + i \times n)$$

↳ Oorblywend / Remaining

4. Rente ? / Interest ?
 $= A - P$

5. Maandelikse paaient / Monthly instalment
 $= \frac{A}{\text{maande}} / \frac{A}{\text{months}}$

<p>a) 'n Nuwe TV word op huurkoop gekoop. Die prys van die TV is R20 000. Jy betaal 15% deposito en betaal die res oor 3 jaar af teen 'n koers van 18% per jaar.</p>	<p>A new TV is bought on a hire purchase agreement. The price of the TV is R20 000. You pay a deposit of 15% and the remaining amount is paid over 3 years at a rate of 18% per year.</p>
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1) Deposito / Deposit

$$R20000 \times \frac{15}{100}$$

$$= \underline{R4000} \rightarrow$$

$$2) \quad R20000 - R4000$$

$$= \underline{R16000} \rightarrow$$

Jy skuld NOG R16000

You OWE R16000

$$3) \quad A = P(1 + i \times n)$$

$$A = 16000 \left(1 + \frac{18}{100} \times 3\right)$$

$$A = \underline{R24640} \rightarrow$$

$$A =$$

$$P = 16000$$

$$i = 18\% = \frac{18}{100}$$

$$n = 3$$

$$4) \quad \text{Rente / Interest} = A - P$$

$$= 24640 - 16000$$

$$= \underline{R8640} \rightarrow$$

$$5) \quad \text{Maandeliks / Monthly} = \frac{A}{M}$$

$$= \frac{24640}{36}$$

$$3 \text{ jaar} = 36 \text{ maande}$$

$$3 \text{ years} = 36 \text{ months}$$

$$= 684,444444 \dots$$

$$= \underline{R684,44} \rightarrow$$

Lees die vrae baie mooi deur!

↳ skryf neer soos jy gaan...

Read the questions carefully!

↳ write down as you go...