

Problèmes du mercredi

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Type de document : travail d'élève

Période de création : 2e quart 20e siècle

Date de création : 1944 (entre) / 1945 (et)

Matériau(x) et technique(s) : carton, papier ligné

Description : Cahier cousu, couverture cartonnée marron, dos toilé noir portant une demi étiquette blanche collée, 1ère de couverture avec le titre et le nom de l'élève en haut, "Cours Complémentaire 2e année", manuscrits en violet. Réglure séyès, encre violette, bleue, noire, rouge, verte, crayons de bois et rouge.

Mesures : hauteur : 21,9 cm ; largeur : 17,3 cm

Notes : Cahier d'exercices d'algèbre et de géométrie, composition de physique, commentaires de l'enseignant.e; certains exercices sont notés. Cours complémentaire 2e année. Voir autres cahiers de cet élève.

Mots-clés : Calcul et mathématiques

Filière : Cours complémentaire

Autres descriptions : Nombre de pages : Non paginé

Commentaire pagination : 120 p. manuscrites sur 120 p.

Langue : français

Galoup Jeannette

Problèmes du Mercredi

Mercredi 25 Octobre 1941

19
20

I.
Pour numéroté les pages d'un livre on emploie 408 caractères d'imprimerie. Quel est le nombre de pages de ce livre?

II.
On écrit les 337 premiers nombres. Combien de fois écrit-on le chiffre 9

III.
Ecrire en caractères Romains

I.
Du 1^{er} nombre 1 au nombre 9 il y a 9 chiffres soit 9 chiffres

Reste $408 - 9 = 399$ chiffres

De 9 à 99 il y a 90 nombres soit 180 chiffres

Reste $399 - 180 = 219$ chiffres

nombre de pages restantes

$219 : 3 = 73$ pages

Nombre de pages totales

$9p + 90p + 73p = 172$ pages

Réponse 172 pages

Du nombre 1 au nombre 337 le chiffre 9 est 33 fois
au rang des unités

Du nombre 1 au nombre 337 le chiffre 9 est 30 fois
au rang des dizaines d'ordre

Du nombre 1 au nombre 337 le chiffre 9 est au
total de $33 + 30 = 63$ fois

Réponse 63 fois

III
Caractères Romains

1443 = M.CD.XL.III.

1938 = M.CM.XXX.VIII.

juste

Vendredi 31 Octobre

Un particulier place les $\frac{3}{4}$ de son capital à 3,5%
le reste à 4%. Au bout de 4 ans et 3 mois, il retire
capital et intérêt réunis une somme qui lui permet
d'acheter un terrain valant 25 000 fr. Le terrain
a la forme d'un quadrilatère, dont les diagonales
perpendiculaires entre elle, mesurent respectivement
275 m et 160 m. Les frais d'acquisition s'élèvent à
15% du prix d'achat. Toutes ces dépenses étant
effectuées le particulier constate qu'il reste 1760 fr.
Quel était son avoir primitif?

Refaire tous les calculs

Surface du champ erreur de calcul
 $375 \times 160 = 60000 \text{ m}^2$ ou 21500 ca ou
 $2 \text{ ha } 15$ 22000 m^2 ou 2200 ca ou $2 \text{ ha } 20$

Prix du champ
 $35000 \text{ F} \times 2,15 = 75250 \text{ fr}$ 55000 fr

Frais
 $53750 \text{ F} \times \frac{15}{100} = 8062 \text{ fr } 50$

Prix de revient du champ
 $55000 \text{ F} + 8062 \text{ fr } 50 = 63062 \text{ fr } 50$

Somme placée et ses intérêts
 $63062 \text{ fr } 50 + 1460 \text{ F} = 64522 \text{ F } 50$

Je suppose que je prends pour capital 700 fr.
 Je place $\frac{700 \times 3}{4} = 525 \text{ F}$ à $3,5\%$ et $\frac{3}{4} - \frac{3}{4} = \frac{1}{4}$
 Je place $\frac{700 \times 1}{4} = 175 \text{ F}$ à 1%

Intérêts de 525 fr. en 1 an ou 12 mois
 $\frac{525 \times 3,5}{100} = 18,375$

Intérêts de 175 fr. en 1 an ou 12 mois
 $\frac{175 \times 1}{100} = 1,75$

Intérêt de 525 fr. en 4 ans 3 mois ou 51 mois
 $\frac{525 \times 3,5 \times 51}{100 \times 12} = 77,53125$

Intérêt de 175 fr. en 4 ans 3 mois ou 51 mois
 $\frac{175 \times 1 \times 51}{100 \times 12} = 7,53125$

Toutes les opérations sont fautes

Total 812,625

300 + 300 x 3,5 x 51 / 100 x 12 = 344,625
 $300 + 400 \times \frac{3,5 \times 51}{100 \times 12} = 468$

Calculs de surface:
 $10 \times 550 = 5500$
 $20 \times 550 = 11000$
 63250

Calculs de prix:
 $275 \times 160 = 44000$
 $275 \times 160 = 44000$
 $44000 \times 2 = 88000$
 $88000 \times 2 = 176000$
 $176000 \times 2 = 352000$
 $352000 \times 2 = 704000$
 $704000 \times 2 = 1408000$
 $1408000 \times 2 = 2816000$
 $2816000 \times 2 = 5632000$
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