

Resumão

especial

MATEMÁTICA FINANCEIRA COM A HP 12C

A CALCULADORA

Lançada em 1981, a HP 12C (chamada popularmente de HP) é a calculadora mais conhecida e utilizada por quem necessita trabalhar com cálculos financeiros.

Avançada — trabalha com muitas funções e memórias — e **programável** — possui funções para edição de programas, número ampliado de memórias, etc. — utiliza o método RPN (sigla em inglês de *Reverse Polish Notation*, ou notação polonesa reversa), criado pelo cientista australiano Charles Hamblin nos anos 50 a partir de um aprimoramento do método de notação polonesa, conhecido desde os anos 20. Esse sistema, combinado com outra característica da HP, que é o funcionamento com **pilha operacional**, possibilita realizar operações lógicas encadeadas, com a inserção de todos os dados de uma única vez, diferentemente do que ocorre com as calculadoras que operam no modo algébrico, em que os cálculos complexos devem ser executados etapa a etapa. E por conta desse modo de funcionamento que na HP os elementos devem ser inseridos antes da operação.

Operação	Notação Algébrica (calculadora comum)	Notação Polonesa Reversa (HP 12C)
$a+b$	$a+b$	$ab+$
$\frac{a+b}{c}$	$(a+b)/c$	$ab+c/$
$\frac{a-b-c}{d}$	$(a-b-c)/d$	$ab+cd/-/$

Assim, para realizar a operação $4+6$ na HP, procede-se da seguinte forma:



Ou seja, digitam-se primeiro os elementos da operação e, por último, a operação (no caso, soma), sem a necessidade de digitar [=], tecla que existe na calculadora HP (no versão Pilha Simples, a tecla [=] existe, porque um dos diferenciais desse modelo é permitir o uso no modo algébrico de cálculo).

A PILHA OPERACIONAL

A HP utiliza um processo de armazenamento de dados denominado **pilha operacional**, que nada mais é do que um arquivo com quatro registradores (X, Y, Z e T) nos quais são "guardados" os valores necessários à realização das operações. Usa-se o nome "pilha" porque os registros vão sendo "empilhados" dentro da máquina; os dados apresentados no visor são os relativos ao registrador X.

A medida que são inseridos novos dados, eles vão sendo "empilhados" até a realização de operações subsequentes. Utilizando o exemplo anterior, é possível compreender, pela figura a seguir, como funciona a pilha operacional da HP.

USO DO TECLADO

Para selecionar a função auxiliar localizada em uma tecla situada acima de uma tecla, aperte a tecla [F] e, em seguida, a tecla de função.

Para selecionar a função primária impressa na face superior de uma tecla, aperte somente a tecla.

Para selecionar a função secundária impressa em uma face inferior de uma tecla, aperte a tecla [C] e, em seguida, a tecla de função.



Tecla	Operação	Resultado	Descrição
[ON]	T		Limpa os registros.
[4]	X		
[+]	Y	4	O número 4 aparece no visor.
[6]	Z	4	
[=]	T	10	O número 4 é "empilhado" em Y, mostrando cópia provisória em X. O número 6 substitui a cópia provisória em X.
[=]	Y	4	
[=]	X	6	
[=]	T	10	Após digitar a operação, os conteúdos de X e Y são somados, e o resultado é mostrado em X.

Como dito, é a combinação do sistema RPN e do funcionamento com pilha operacional que permite otimizar as operações na HP em relação às calculadoras convencionais.

Vejamus a seguinte expressão:

$$(7+3) + (5+4)$$

Enquanto em uma calculadora algébrica (convencional) é necessário realizar cada operação colocada entre parênteses de uma vez e anotar o resultado, na HP é possível realizar todas as operações simultaneamente:



Note que as operações são feitas seguindo a hierarquia algébrica (primeira, a que está dentro dos parênteses). Assim, a soma entre os parênteses é a última etapa, precedida ape-

nas depois que a calculadora já armazena, na pilha operacional, o resultado da operação de cada um deles.

Nota: a tecla ENTER somente é utilizada para a introdução dos primeiros números. Isso porque, após o segundo número, em cada operação, é dado um comando (somar e subtrair). Assim, a calculadora pode identificar que o número "arrabou". Isso não ocorre quando se introduz o primeiro número. Portanto, ENTER "informa" à calculadora que o próximo número a ser digitado não completará mais a primeira operação da conta e que ela pode armazenar aquele valor já introduzido na pilha operacional.

TESTE SUA CALCULADORA

Para realizar um teste rápido de funcionamento, proceda da seguinte forma: desligue a calculadora. Com a HP desligada, aperte a tecla correspondente ao sinal de multiplicação [x]. Mantendo a tecla pressionada, tecla [=] e, em seguida, tecla [x]. A calculadora apresentará a mensagem "testing" (processando) e, na sequência, o visor mostrará todos os bits ligados, com o sinal (-) à frente, dez números e todas as funções provisórias, o que demonstra que sua calculadora está em perfeito funcionamento. Apertando qualquer tecla, a máquina voltará ao modo normal.

MEMÓRIA

A memória da HP é constante, ou seja, conserva os dados armazenados mesmo quando a calculadora é desligada. Há 20 memórias, que são armazenadas em registradores numerados de 0 a 9 e de 0 a 9 (coloca-se o ponto antes do número do registrador).

Por exemplo, para armazenar o número 35 no registrador 3 e o número 71 no registrador 1:



Para recuperar os dados:



Manual Da Hp12c

L Towne



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GUIA PRÁTICO DE UTILIZAÇÃO DA CALCULADORA FINANCEIRA HP12C, 2015-03-10 Este guia para o usuário da HP12C foi criado para auxiliar o usuário a aproveitar o máximo possível os recursos da calculadora financeira programável HP12C Embora a intenção ao adquirir esta poderosa ferramenta financeira possa lhe fazer colocar este texto de lado e começar a apertar botões imediatamente no longo prazo você ganhará se tiver lido esta guia e experimentado os exemplos apresentados

Matemática Financeira I: com a Calculadora Hp 12c, **Matemática financeira na prática** Paulo Vagner Ferreira, 2019-01-01 Aprenda a resolver os desafios de matemática financeira na prática através da resolução passo a passo de problemas financeiros reais utilizando fórmulas calculadora financeira HP 12C ou planilha eletrônica Neste livro você aprenderá sobre Taxa de juros Capitalização a juros simples e compostos Anuidades Análise de viabilidade financeira VPL e TIR Amortização de dívidas Price e SAC Desconto simples e composto e Depreciação pelos métodos linear crescente e decrescente **COMO AUMENTAR SEU PATRIMÔNIO** LILIAN GALLAGHER, Neste livro serão discutidas questões como mercado empresarial imobiliário e financeiro Busca ajudar e incentivar as pessoas na busca do crescimento e da independência financeira destinado às pessoas que não o entendem da realidade financeira e querem ou precisam aprender a lidar com suas finanças pessoais São apresentados produtos financeiros destinados pessoa física e abordadas questões como aposentadoria e heranças para que o leitor receba a orientação de que precisa para viver bem com seu dinheiro Elaboração e Avaliação de Projetos de Investimento Jocildo Figueiredo, 2009 **Dia de chuva** Alvaro Modernell, 2024-11-04 Dia de chuva um convite para fazer coisas diferentes especiais dia de aconchego Dia de chuva bom para abrir um livro e se deliciar Essa obra fala das coisas boas que se pode fazer e curtir em dias de chuva Deixe este livro guardadinho até o próximo dia de chuva Então leia e aproveite Educação Financeira E Finanças Pessoais Valter Saurin, Christine Saurin, Luiz Fernando Saurin, 2017-05-14 **SUMÁRIO** Este livro inclui conceitos exemplos e exercícios sobre educação financeira e finanças pessoais 1 Introdução que aborda a educação financeira fazendo uma síntese sobre objetivos pessoais dinheiro dívidas aposentadoria seguros e de finanças pessoais referindo-se às aplicações financeiras das compras a prazo e das armadilhas financeiras 2 Controle financeiro que demonstra o uso dos quadros de pagamentos recebimentos fluxo de caixa aplicações financeiras e da posição patrimonial 3 O valor do dinheiro no tempo que inclui o estudo das taxas de juros os índices básicos de medição da inflação a taxa de desvalorização da moeda a taxa de juros real o valor presente o valor futuro e o uso da calculadora HP12C 4 Planejamento financeiro que analisa a poupança e ciclo de vida o seguro social a previdência privada gastos com uma carreira profissional e a decisão de comprar ou alugar um imóvel 5 Investimento financeiro que trata dos fatores das modalidades dos fundos de investimentos e do imposto de renda incidente sobre aplicações financeiras 6 Moeda digital que trata de bitcoin blockchain segurança do sistema e a geração de bitcoins 7 Referências que indica a bibliografia consultada 8 Anexos que inclui as respostas das questões de revisão uma lista de exercícios com a solução um modelo de questionário sobre habilidade numérica e perfil de risco e um

resumo sobre fundos de investimentos ABSTRACT This book includes concepts examples and exercises about financial education and personal finance 1 Introduction which addresses financial education making a synthesis on personal goals money debts retirement insurance and personal finance referring to financial investments term purchases and financial traps 2 Financial control which demonstrates how work the tables of payment receipts cash flow financial investments and equity position 3 The time value of money which includes the study of interest rates the basic inflation indexes the rate of currency devaluation the real interest rate the present value the future value and the use of HP12C calculator 4 Financial planning which examines saving and life cycle social security private pension career expenses and the decision to buy or rent a property 5 Financial investment which addresses the factors modalities investment funds and income tax on financial investments 6 Digital currency which deals with bitcoin blockchain system security and the generation of bitcoins 7 References which indicates the bibliography consulted 8 Attachments which includes the answers to the review questions a list of exercises with the solution a questionnaire model on numerical ability and risk profile and a summary of investment funds

Matemática financeira sem segredos Helio de Carvalho Mielli,2020-04-08 Matemática financeira sem segredos foi escrito pensando no estudante Assim os conceitos financeiros são tratados de maneira simples e direta com foco em sua aplicação prática Desmistificar conceitos que poderiam parecer bem complicados essa foi a intenção básica do autor Helio de Carvalho Mielli que leciona matemática financeira há mais de 30 anos e conhece de perto as dificuldades das pessoas com os números Nesta obra são apresentados exemplos do mercado financeiro e exercícios baseados em situações atuais resolvidos de forma lúdica pelas funções da calculadora HP 12C e pela planilha de cálculo Excel Alunos de cursos como administração e ciências contábeis bem como profissionais que exercem suas atividades nos setores financeiros de organizações públicas ou privadas em controladorias compras etc podem encontrar neste lançamento do Senac São Paulo subsídios importantes para o planejamento de suas atividades

Visão ,1987 **Exame informática** ,1994-07 **InfoWorld** ,1981-12-07 InfoWorld is targeted to Senior IT professionals Content is segmented into Channels and Topic Centers InfoWorld also celebrates people companies and projects

Anuário editorial brasileiro ,1998 **Manual Prático Da Calculadora Financeira Hp12c** Leonardo Berteli Piveta,2019-07-10 Este manual foi desenvolvido com o intuito de tornar qualquer pessoa mesmo que leiga em relação à utilização da Calculadora Financeira HP 12C competente em seu uso Profissionais que têm conhecimentos e vivências nas áreas de administração contabilidade economia finanças engenharias e afins irão através de uma maneira direta compreender as principais funções da Calculadora HP 12C e após cada nova função aprendida fixar o conteúdo por meio de um conjunto de exercícios com respostas para conferência Todas as explicações são acompanhadas de ilustrações que mostram a sequência de comandos exata para facilitar o aprendizado de pessoas que não estão acostumadas com a calculadora financeira ou não a conhecem Contudo importante enfatizar que mesmo pessoas que não têm um conhecimento sólido em matemática financeira poderão através da prática dos exercícios propostos solucionar problemas e questões que abrangem toda a estrutura

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Reviewing **Manual Da Hp12c**: Unlocking the Spellbinding Force of Linguistics

In a fast-paced world fueled by information and interconnectivity, the spellbinding force of linguistics has acquired newfound prominence. Its capacity to evoke emotions, stimulate contemplation, and stimulate metamorphosis is truly astonishing. Within the pages of "**Manual Da Hp12c**," an enthralling opus penned by a very acclaimed wordsmith, readers embark on an immersive expedition to unravel the intricate significance of language and its indelible imprint on our lives. Throughout this assessment, we shall delve into the book's central motifs, appraise its distinctive narrative style, and gauge its overarching influence on the minds of its readers.

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