

PROGRAD / COSEAC

CURSO	Disciplina 1	Disciplina 2
Ciência Ambiental	Língua Inglesa	Matemática

Prova de Conhecimentos Específicos

Read the text and answer the questions in English.

eBooks vs books – Will Printed Books Die?



Will printed books die? It seems impossible to imagine, but there is a real fear amongst book lovers that soon books will be nothing but a distant memory. In the 1980's the CD was invented. Many people were certain that LPs (or vinyl records if you prefer) would continue to be the preferred way to listen to music.

It was argued that CD's were too fragile, that the sound was too electronic and that they would ever sound as good. However, within a decade, vinyl record sales had collapsed and the production of new vinyl albums had all but disappeared completely. And now we are experiencing a decline in CD sales as more people opt to download music direct to their computers and smartphones.

So what does this tell us about the new dilemma **eBooks vs. books**? Well, for a start, no matter how passionate some people are about books, there is a whole generation of people growing up who have never felt the need to refer to printed books. Information, stories, textbooks and magazines are all available online. You can order a new book from Amazon or other electronic bookstore in ebook format and it will be downloaded almost instantly to the device of your choice. You do not even have to wait for the postman to deliver it anymore.

Besides, eBooks can be saved to your computer once you have bought them and you can back them up too. But by far, the greatest benefit of eBooks is that they can be so quickly distributed globally. A new book can be published and instantly available in every country to buy.

We are living in a society where bookshops are closing, libraries are disappearing and all the while eBook sales and downloads continue to break new records. Amazon and other online bookshops reported earlier in 2011 that eBooks were out-selling paper books. The tide has turned. Will printed books survive?

Despite the fact I love printed books and I look forward to the day that I can share my book collection with my children, I see that printed books will ultimately be in decline and maybe, one day, they will be a distant memory. What do you think? Is this a change for the better or the death of a part of our cultural history?

Adapted from: http://tips4pc.com/computer_tips_and_tricks/ebooks-vs-books-will-printed-books-die.html.

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1st QUESTION: (0,5 mark)

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In the first part of the text, the author discusses the decline of vinyl albums after the invention of the CD. Why is this topic discussed in the text? In other words: what is the relationship between this topic and the general theme of the article as a whole?

2nd QUESTION:(0,5 mark)

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What is the author's position concerning the dilemma "eBooks vs. printed books" ?

3rd QUESTION: (0,5 mark)

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Identify and copy two examples/ideas from the text that support the author's position concerning the dilemma "eBooks vs. printed books".

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6ª QUESTÃO: (1,0 ponto)

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Verifique se as afirmações a seguir são verdadeiras ou falsas. Justifique sua resposta.

- a) O produto de três números naturais consecutivos é um número par. (0,3 ponto)
- b) Entre dois números inteiros sempre existe um número inteiro. (0,2 ponto)
- c) A soma de dois números racionais é um número racional. (0,2 ponto)

- d) $\sqrt{\frac{2^8+2^5}{2^3}}$ é um número irracional. (0,3 ponto)

Cálculos e resposta:

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7ª QUESTÃO: (1,0 ponto)

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Em certo curso de graduação, sabe-se que, do número total de alunos, 85% são do sexo feminino e que apenas 72 alunos são do sexo masculino. Determine o número total de alunos do curso.

Cálculos e resposta:

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8ª QUESTÃO: (1,0 ponto)

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Dentre as canetas produzidas por certa fábrica, a probabilidade de uma delas **ser** defeituosa é $\frac{1}{10}$.

- Uma caneta é escolhida aleatoriamente. Qual a probabilidade de ela **não ser** defeituosa? (0,4 ponto)
- Duas canetas são escolhidas aleatoriamente. Qual a probabilidade de **pelo menos uma delas ser** defeituosa? (0,6 ponto)

Cálculos e respostas:

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9ª QUESTÃO: (1,0 ponto)

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Determine os valores reais de x que são soluções da equação $(4 - \ln x)(x^2 - 1) = 0$.

Cálculos e respostas:

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10ª QUESTÃO: (1,0 ponto)

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Considere f a função real de variável real definida por $f(x) = \cos^2(2x) - \sin^2(2x)$.

- a) Determine o valor máximo de f , o valor mínimo de f e os valores de x tais que $f(x) = \frac{1}{2}$. (0,6 ponto)
- b) Verifique se f é periódica e, em caso positivo, determine o período. (0,4 ponto)

Cálculos e respostas:

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