

**BACCALAURÉAT GÉNÉRAL  
ÉPREUVE SPÉCIFIQUE DES SECTIONS EUROPÉENNES  
MATHÉMATIQUES – ANGLAIS**

**SUJET 18**

**Percentages**

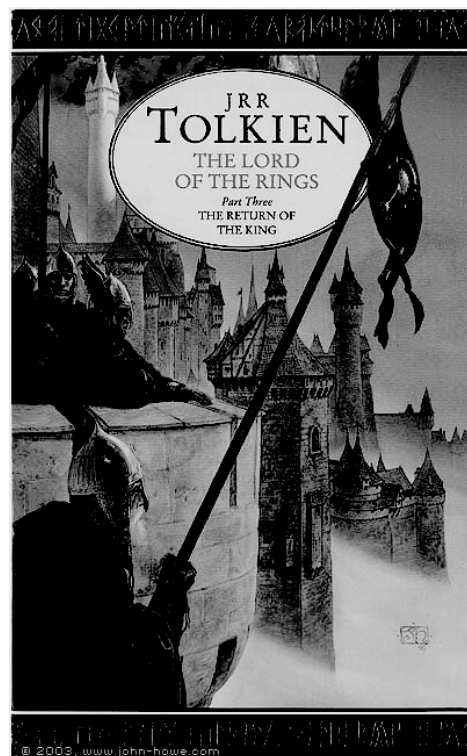
Ce sujet comporte 2 pages. L'usage de tout modèle de calculatrice, avec ou sans mode examen, est autorisé.

**The siege of Minas Tirith**

[In this excerpt, Pippin and his friend Bergil are watching the arrival of reinforcement in the city of Minas Tirith. But they are disappointed because there are not enough soldiers to be victorious. And now the night comes.]

And that was all, less than three thousands full told<sup>1</sup>.  
*No more would come. Their cries and the sound of their feet passed into the City and died away. The crowd stood silent for a while. Dust hung in the air, for<sup>2</sup> the wind had died and the evening was heavy. Already the closing hour was drawing nigh<sup>3</sup>, and the red sun had gone behind Mindolluin<sup>4</sup>. Shadow came down on the City.*

*Pippin looked up, and it seemed to him that the sky had grown grey as ashes, as if a vast dust and smoke hung above them, and light came through it with difficulty. But in the West the dying sun had set all the clouds on fire, and now Mindolluin stood black against a burning smoulder flecked with embers<sup>5</sup>.*



*The Lord of the Rings, Book 3 : The Return of the King, Chapter 1 : Minas Tirith, Page 17, written by  
J.R.R. Tolkien in 1954-1955.*

<sup>1</sup> *Full told* : tout compté

<sup>2</sup> *For* : ancienne utilisation du mot "for" signifiant ici "car"

<sup>3</sup> *Was drawing nigh* : s'approchait

<sup>4</sup> Le Mindolluin est un pic des Montagnes Blanches, à l'Ouest de la cité de Minas Tirith.

<sup>5</sup> *Burning smoulder flecked with embers* : feu brûlant tacheté de braises

Vous devez restituer le sujet à la fin de l'épreuve

**I. Explain what the text deals with and comment on it.**

**II. Exercises:**

During the battle of Minas Tirith, there are 5,000 archers in the city. Among archers, 20 percent are from the city of Minas Tirith, 30 percent are from the city of Dol Amroth, and the rest are from the region of South Gondor. For each region or city, 5 percent of archers are captains.

1. How many captains from Dol Amroth are there?
2. How many archers (excluding captains) from Minas Tirith are there?
3. What's the percentage of archers from the region of South Gondor?

Gandalf the magician organizes the defense of the city against Sauron and his hords of orcs, and places his men on the walls. Ten archers shoot a total of one hundred arrows in one minute.

4. On the South wall, Gandalf put fifty archers and they shot arrows during three hours. How many arrows did they shoot?
5. One hundred archers are defending the North wall. They have a stock of 200,000 arrows. How long can they hold before they don't have any arrow left?