

Grade 8 Mathematics Worksheet

Problem solving of rates

Questions:

1. John is reading the book *Lord of the Rings* by JRR Tolken. This book has on average 44 lines per page and about 63 characters per average line. The book also has 1 216 pages.
 - a) If the average word in the book is 6 characters long, how many words are there on one page of the book?
 - b) How many words are there in the book?
 - c) John is currently on page 323. What fraction of the book must he still read? (Round off your answer to the nearest rational number).

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Solution

1. a) On one page:
 $44 \text{ lines per page} \times 63 \text{ characters per line} = 2772 \text{ characters.}$
Thus the number of words per page: $\frac{2772}{6} = 462 \text{ words per page.}$
- b) Number of words in the book = $462 \times 1216 = 561792 \text{ words.}$
- c) $\frac{1216 - 323}{1216} = \frac{47}{64} = \frac{73,4375}{100}$. He must still read 73% of the book or roughly $\frac{7}{10}$ of the book.