THE BARTON SERIES

BARTON AS USUAL

BY

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(Ages 8 and over)

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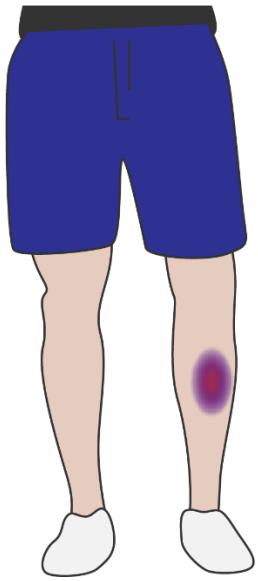
TAKING CARE

The school bell tolled announcing the end of the school day. The sounds of students exiting the classrooms and the excitement of their chatter as they made their exit from the school's compound echoed loudly. However, one could distinctly hear a small boy calling the name of Barton, whom he had spotted in the distance. The boy was perched halfway up the school gate and was waving excitedly, as he shouted Barton's name.

From his vantage point, the boy got a good view of the students as they made their way through the gates and into waiting vehicles or started their walk home.

Barton had heard the little boy from a distance, and as he approached him, the little boy quickly jumped down. He got a small scrape on his knee whilst doing so, but didn't even seem to notice.



"Barton," he said excitedly, "I have some fantastic news to tell you."

Barton recognised the little boy as the one who had done poorly on a mathematics test a few weeks ago and was feeling rather dejected. Barton had helped the boy to identify the errors in his work and which were careless mistakes made entirely by him. The little boy was too anxious to become the first in the class to complete the test. In his haste, as often the case with ones who rush, he had misread the questions.

Barton had concluded, though, that the boy's knowledge of mathematics was quite sound. He realised that the little boy was able to solve all the questions entirely on his own when he re-read the questions carefully. His thinking and answering were quite good and he expressed his solutions beautifully. The boy had promised since then to be careful in the future with the reading and solving of his mathematics questions.

"I would love to hear your great news," said Barton.

However, the little boy began even before Barton could have finished his sentence.

"Barton," he started, slightly out of breath, "we had a mathematics test today and I excelled. Look at what I did in each question."

The little boy pulled out a neatly folded piece of paper from his pocket and started to read each question. He thoroughly explained to the attentive Barton all the steps of his reasoning. He was certain to show Barton the extra care he took to avoid any errors that could have been due to misreading.

Question 1

What is the value of the digit 2 in the numeral 3 241?

Solution:

I started to check the digits from the right to the left

The 1 is in the units position

The 4 is in the tens position

The 2 is in the hundreds position

If the question had asked for the place value of the digit, 2, then the answer would have been hundreds.

The question, though, asked for the value of the digit, 2.

This would now be 2 (100) = 200

The value of the digit 2 in the numeral 3 241 is 200.

"I was cautious, Barton," he said.

"You have done well so far," replied Barton, as the little boy anxiously continued.

Question 2

Write the number 3.5 as an improper fraction.

Solution:

I began by looking at the decimal after the whole number and which was .5

I converted .5 to a fraction and it became $\frac{5}{10}$

When I divided both the numerator and the denominator by 5, this fraction reduced to ½

Hence 3.5 = 3 ½

The question did not require a mixed fraction which is 3½. Instead, they asked for an improper fraction.

I fixed that easily

3 ½ = {(2 x 3) + 1} / 2

$= (6 + 1) / 2 = \frac{7}{2}$

Hence 3.5 as an improper fraction is 7/2, expressed in its lowest terms.

"Wasn't my work here great, Barton?" asked the little boy.

"Most certainly it was," replied Barton.

Question 3

Write all, the whole numbers that are more than 6 and less than 10.

Solution:

Notice that the whole numbers are more than 6 and therefore must start at 7 since 6 is not to be included.

The whole numbers are to be less than 10 and so the last one should be 9. The number 10 is not to be included.

The whole numbers that are more than 6 and less than 10 are 7, 8 and 9 only.

"What do you think of my thinking, Barton?" asked the little boy.

"It is indeed very sound," replied Barton, quite impressed with the little boy's work so far.

Question 4

Which of the following is NOT a quadrilateral?

(i) Triangle

(ii) Square

(iii) Rectangle

(iv) Circle

Solution:

I remembered that a quadrilateral is bounded by four straight lines.

As I first looked at (i) I recalled that a triangle is bounded by only three straight lines.

Hence (i) is an answer.

However, I decided to check all three other options before I wrote down (i) only.

It was fortunate that I did so.

The square of (ii) and the rectangle of (iii) are both bounded by four straight lines and are quadrilaterals.

However, (iv) is a circle and this is not bounded by four straight lines.

Hence, the answer is both (i) and (iv).

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"I am glad that I was cautious here, Barton," said the boy.

"I am happy that you were, too," replied Barton, proud of the little boy.

"That was a fabulous bit of reasoning and flawless," said Barton.

"Look at my final grade," boasted the little boy, as he showed Barton the front of the paper. The grade was written at the top and a small star stuck next to it.

“I stuck the star, Barton. I keep some in a pack in my bag and I place one next to an assignment in which I get a grade of A.”

“I am proud of you,” said Barton, “your work has been outstanding and you deserve the grade you got.”

As they parted ways on their way home, Barton waved to the little boy and smiled at him as he ran off into the distance. And, as Barton watched him, with one of his feet wet and muddy, he could see him hopping on one foot sometimes and occasionally kicking a pebble on the road.