

# Discussion Problems

## Step 3: Rounding Numbers

### National Curriculum Objectives:

Mathematics Year 6: (6N4) [Round any whole number to a required degree of accuracy](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 6 Place Value](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# Rounding Numbers

1. Bruce the Banker has made some mistakes at work! Instead of simply looking after their money, he has rounded the customers' savings to different amounts!



Sam

My savings have increased by over four hundred thousand pounds! I used to have less than £3,600,000!

I checked my account and noticed my savings had almost doubled!



Angie



Tony

I had nearly saved as much as Angie, but have now lost nearly half of £10,000!



Bruce



Using the information from above and your knowledge of rounding, investigate the possible savings each customer could have started with before Bruce's mistakes.

What could Bruce's mistake have been for each customer?

DP

2. Dr. Hattenberg has recently discovered a new rainforest and is researching the different insects living within it.

He says,



I am trying to get a maximum number of 7.5 million insects to study but there is no way I can count them all individually!



Insect	Estimated Population
Ants	2,555,188
Spiders	1,571,243
Flies	3,672,129
Beetles	1,674,009
Stag Beetles	1,546,102
Cockroaches	2,585,091
Bees	904,381

Using the information from above, explore the different combinations of insects that Dr. Hattenberg could study by rounding the estimated population of each one first.

DP

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Bruce



Using the information from above and your knowledge of rounding, investigate the possible savings each customer could have started with before Bruce's mistakes.

What could Bruce's mistake have been for each customer?

**Various answers, for example:**

**Sam – £3,500,000. Bruce has rounded to the nearest million.**

**Angie – £50,050. Bruce has rounded to the nearest hundred thousand.**

**Tony – £44,999. Bruce has rounded to the nearest ten thousand.**

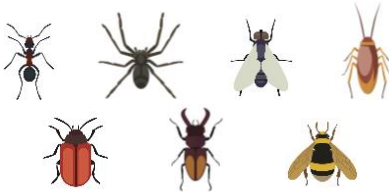
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**Various answers, for example:**

**Ants rounded to the nearest million – 3,000,000; Spiders rounded to the nearest hundred thousand – 1,600,000; Bees rounded to the nearest ten thousand – 900,000; Beetles rounded to the nearest million – 2,000,000.**

**$3,000,000 + 1,600,000 + 900,000 + 2,000,000 = 7,500,000$ .**

DP