



**Lesson 3**

Thursday 11<sup>th</sup> June 2020

I am learning to answer reasoning and problem solving questions including rounding and negative numbers.

Try your best to answer as many questions as you can. 😊

**Reasoning Questions**

Key vocabulary: Digit, rounded, nearest, column, minus, negative, positive	Your answer
<p>Zach rounded 3,315,678 to the nearest million and wrote 3,315,000.</p>  <p>Can you explain to Zach what mistake he has made?</p>	
<p>A company decided to build offices above and below ground level.</p> <p>If they build from -10 to 10, we will have 20 floors.</p>  <p>Do you agree? Explain why.</p> <p>ie</p> <p>masterthecurriculum.co.uk</p>	

When counting backwards in tens from any positive one-digit number, the last digit does change.

When counting forwards in tens from any positive one-digit number, the last digit never changes.

Can you find examples to show this?  
Explain why this happens.

8 Three children have rounded 471,958 to the nearest 100,000



Eva

500,000



Jack

400,000



Rosie

472,000

Who is correct?

Explain the mistake the other children have made.

## Problem Solving

My number is 2,350 when rounded to the nearest 10.



Tia

My number is 2,400 when rounded to the nearest 100.



Esin

Both numbers are whole numbers.



What is the greatest possible difference between the two numbers?

Miss Smith gives out four number cards.

16,987

My number rounds to 16,000 to the nearest 1,000.



Tia

15,813

My number has two hundreds.



Zach

16,201

My number is 16,990 when rounded to the nearest 10.



Malachi

15,101

My number is 15,000 when rounded to the nearest 1,000.



Rosie

Can you work out which child has which card?

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81

9

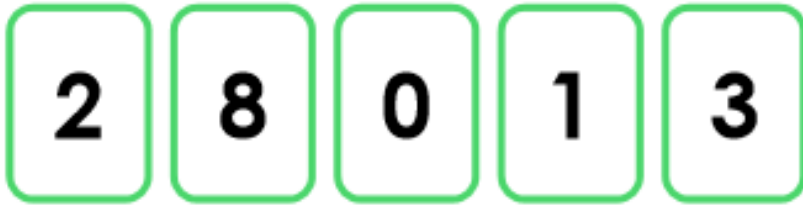
A and B are integers.

A = 300,000 to the nearest 100,000

B = 300,000 to the nearest 10,000

- a) What is the greatest possible value of  $A + B$ ?
- b) What is the smallest possible value of  $A + B$ ?
- c) What is the greatest possible value of  $A - B$ ?

**6a. Use the digit cards to create a calculation which equals -18.**



**You can only use each digit card once per calculation, but do not need to use all of them.**

**Is there more than one possible answer?**



PS

