# Island Numeracy Assessment
# Grade 6+:  Number Sense A

## Collaborative Task 1

I wrote down a four-digit number that's divisible by 3, 4, 5, and 6 but I spilled a cup of tea on it and can only see the first two digits.

The first two digits were 95 (in that order). What were the last two digits?

**9540**

The second time it happened, I was again trying to make a four-digit number divisible by 3, 4, 5 and 6 with the first two digits being 12 (in that order).

Was I successful?

Share your thinking.

## Collaborative Task 2

**How much money?**

Act 1:

Show the image of stacks of money below. Invite learners to consider, “What do you notice? What do you wonder?”

Most likely students will wonder “How much money is that?”

Invite students to estimate the amount of money there is:


**Act 2:**

Show the video (be sure to preview video). https://youtu.be/MIq3lI7n9Vg

How much money is that?

Reveal some information about the money

A few notes about the money:

- My assumption is that all of the United States bills are $100 bills.
- I am ignoring the colourful money in front of the United States bills as they do not appear to be US currency.
- Looking at Picture 1 (with help from Picture 3) it looks like the main stack of bills go back 11 rows with a slightly less high 12th row in the front.
- Looking at Picture 1 (with help from Picture 2) it looks like the pile has 34 columns of bills.

**Break the students into groups of 2-3 and have them solve for how much money there is.**

**Act 3:**

Full task and solution to *How much money IS that?* : https://robertkaplinsky.com

**Around $ 200,000,000**

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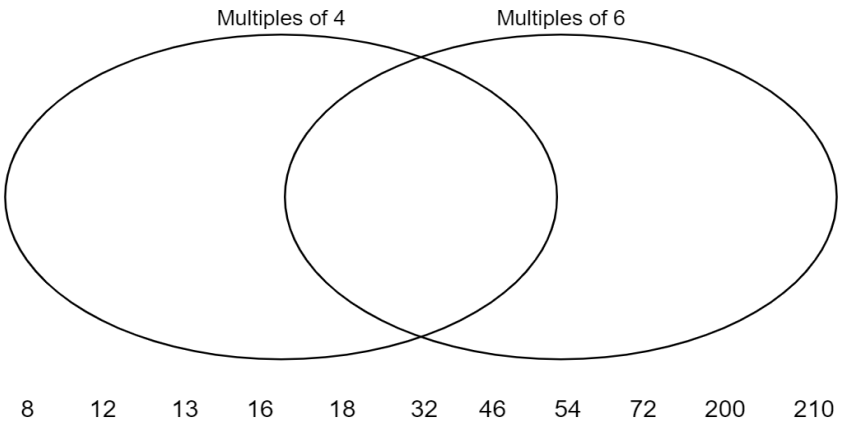
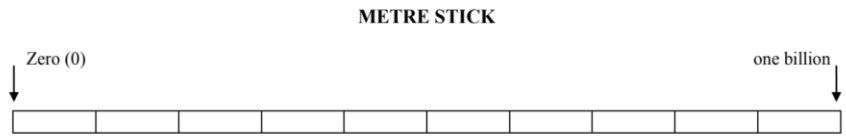
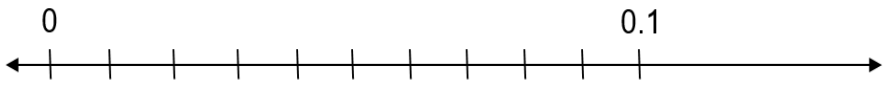
| Assessment Question | Answer Key |
|---|---|
| 1. Write the numeral for seven billion fourteen million three hundred sixty thousand two hundred ten? | 7 014 360 210 |
| 2. What is 3.016 written in words? | Three and sixteen thousandths |
| 3.<br>3 2 1 4 7 9 6 5 8<br>Which number represents each place value?<br>____ ten millions<br>____ hundred thousands<br>____ hundreds<br>____ tens | 2 ten millions<br>4 hundred thousands<br>6 hundreds<br>5 tens |
| 4. List as many factors of 84 as you can. | 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84 |

| | |
|---|---|
| 5. Using the numbers listed below, place the numbers where they best fit in the Venn diagram<br>  <br> | Outliers: 13, 46<br>4: 8, 16, 32, 200<br>6: 18, 54, 210<br>Common: 12, 72 |
| 6. Heather works every 4th day and Sam works every 3rd day. If they both work on July 5th which other dates in July will they work together? Show how you know.<br>  <br> | July 17 and July 29 |
| 7. List the Prime Numbers between 0 and 20.<br>Show how you know. | 2, 3, 5, 7, 11, 13, 17, 19<br><br>Pay attention to student reasoning for why 1 is *not a prime number.*<br>A prime number has exactly two factors: 1 and itself. 1 is not a prime number. |

| | |
|---|---|
| 8. What is the greatest common factor of 24 and 60? Show how you know. | 12 |
| 9.<br>  <br><br>If the meter stick represents one billion, where would the one million be located on the stick?<br>Explain your thinking in the space provided. | It would be right next to the zero on the line. |
| 10.<br>  <br><br>Where would you place the following values on the number line above?<br>- 0.09<br>- 0.02<br>- 0.005 | |
| 11. A 6-digit number is read as ___thousand forty _____. What could it be? | Multiple responses: Ex: 100 042<br>125 047<br>909 041<br>Source: Marian Small |

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## Performance Task 1:

Find **three consecutive numbers** where the first is a multiple of 2, the second is a multiple of 3 and the third is a multiple of 4.

Find at least two more sets of three consecutive numbers that follow the same rule.

What do you notice?

Show how you know?

Define consecutive numbers as a class.

2, 3, 4

14, 15, 16

26, 27, 28

38, 39, 40

50, 51, 52

*Are students noticing even, odd, even as a pattern? Do they notice that the digital root is 9 when adding all digits in any sequence?*

Possible extensions:

*What if the first is a multiple of 3, the second is a multiple of 4 and the third is a multiple of 5?*

*3, 4, 5*

*63, 64, 65*

*123, 124, 125*

*183, 184, 185*

*What if the first is a multiple of 4, the second is a multiple of 5, and the third is a multiple of 6?*

*4, 5, 6*

*64, 65, 66*

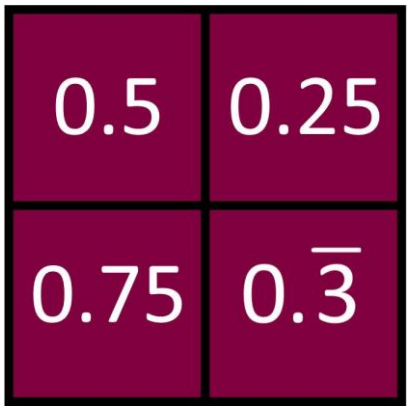
*124, 125, 126*

*Is there a way to find sets of **four consecutive numbers** which are multiples of 2, 3, 4 and 5 (in this order)?*

*Or **five consecutive numbers** which are multiples of 2, 3, 4, 5 and 6 (in this order)?*

## Performance Task 2:

Can you find a reason why each number is different than all the rest?




Top Left - non-repeating to the tenths

Top Right - ¼ or less, closest to 0

Bottom Left - closest to 1

Bottom Right - only repeating decimal, not a multiple of ¼, does not include the digit 5