

Island Numeracy Assessment Grade 3+: Number Sense

Collaborative Task

1. A student is asked how many tens are in the number 412.

Do you think that there is more than one answer?

Yes, you could draw base ten blocks to show 410 and 2 ones (so there are a lot more tens). You could also show 40 tens and 12 ones.

Or

No there is only a 1 in the tens place. I can draw base ten blocks or show 4 hundreds, 1 ten and 2 ones

Draw a picture to show your thinking?

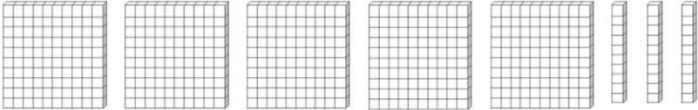
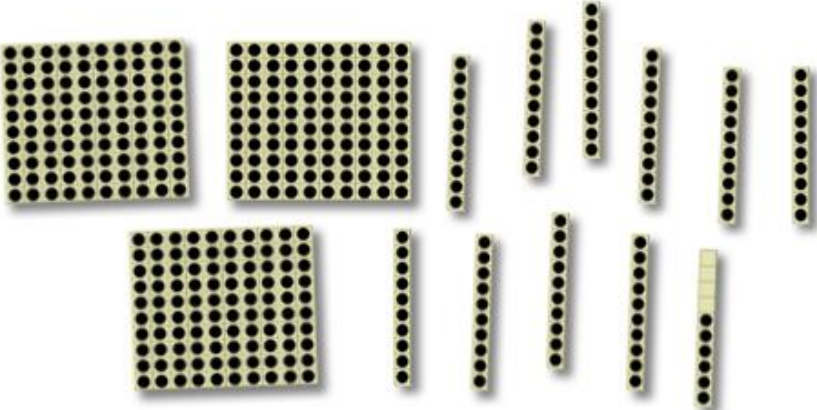
2. How are the sevens in 737 different?

Sample response: the 7 is in the hundreds place and is worth 700. But the 7 in the ones place is worth only 7

OR

the 7 on the left is worth more than the 7 on the right. Place value grows as you move to the left.

Island Numeracy Assessment Grade 3+: Number Sense (Answer Key)

Assessment Question:	Answer Key
<p>1. Write the number the teacher says. Here is an example: If the teacher says one hundred nineteen, you write 119.</p> <p>A. _____</p> <p>B. _____</p> <p>C. _____</p> <p>D. _____</p>	<p>78 113 40 906</p> <p>Teacher says the number and students write the numeral.</p> <p>(extensions – 1080, 5009... write the number that comes after 5009)</p>
<p>2. What number is shown by the blocks? _____</p> 	<p>530</p>
<p>3. What number is shown by the dots below?</p> 	<p>406</p>

4. What is the value of the underlined digit?
Circle the quantity that it represents in the picture below?

148 jelly beans



40

Circle 40 jelly beans

(adapted from First Steps in Math diagnostic Dinosaur Task)

5. Order these numbers from least to greatest...

605, 714, 711, 709

_____, _____, _____, _____

605, 709, 711, 714

6. One way to break apart the number 415 is to write it as 4 hundreds and 15 ones. Show two more ways to break apart 415.

4 hundreds + 1 ten + 5 ones

41 tens and 5 ones

40 tens and 15 ones

39 tens and 25 ones

When decomposing and representing 415, a show of “part, part, whole” understanding can be written as:

I notice that every time the number of tens increases by one the number of ones decreases by 10



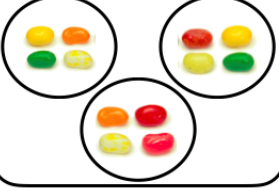
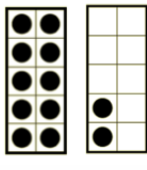
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Performance Task:

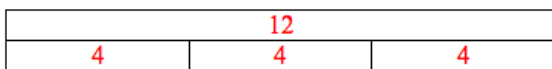
- Choose a number from the following: 24, 18, 36, 144, 45, 15
- Write your chosen number inside the centre box.
- Represent the number in pictures, numbers, and words in the surrounding boxes.

Assessment considerations:

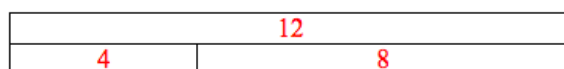
- Project the sample below for discussion (and then put it away)
- Ask students what they notice, think, wonder...
- Then, invite students to think of one more representation for the bottom left corner
- For students familiar with representing numbers in a variety of ways, frontloading with this sample will not be necessary.
- Consider photocopying the blank number mat double-sided to allow for pre- and post-assessment evidence

$10 + 2$		4 groups of 3
	12	
	6×2	

Singapore Bar Model Representation:

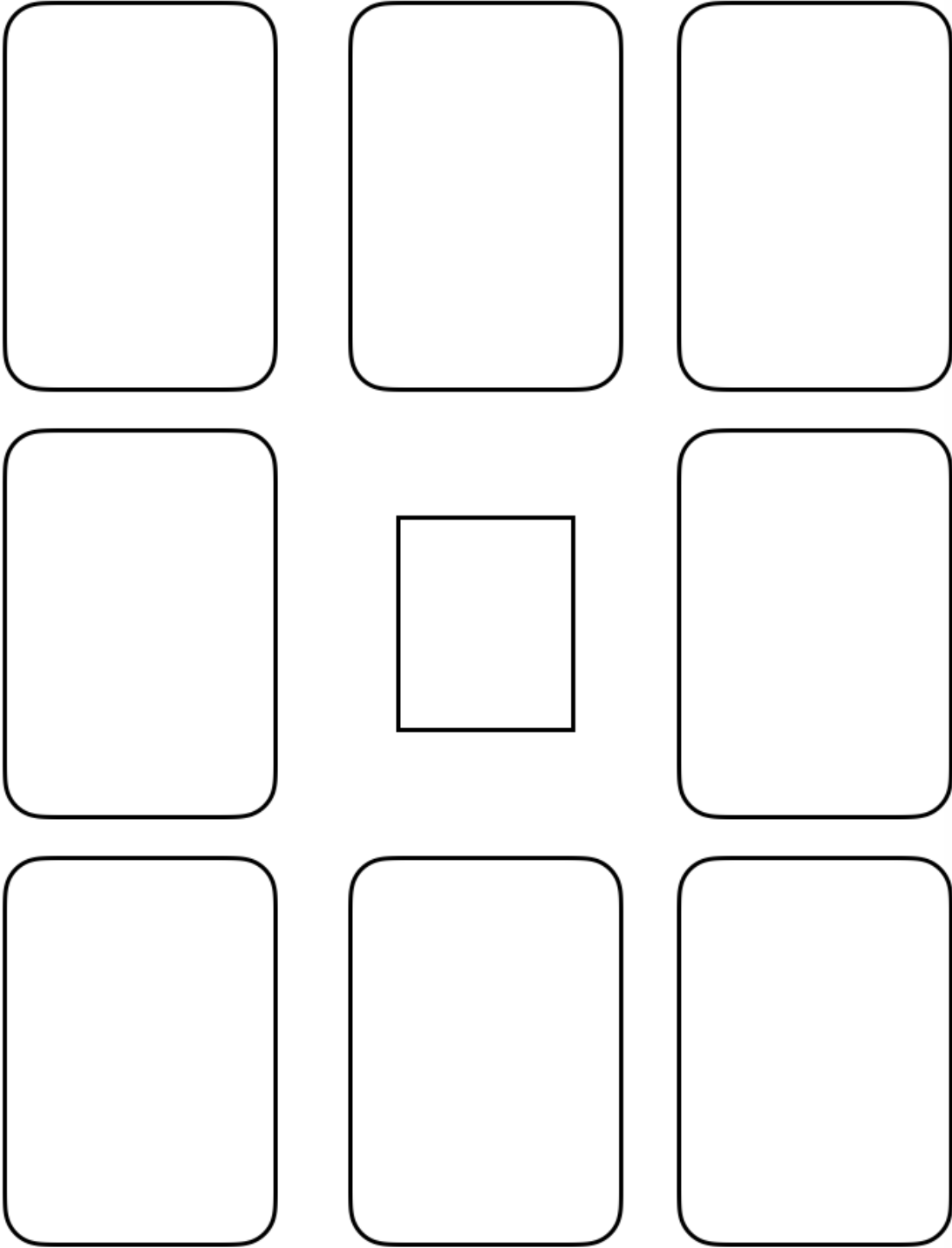


This models partitioning



This models decomposing

Performance Task student page is landscape in order to enlarge the workspace



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Performance Task: (project image)

How many mini marshmallows might be in a full bag of marshmallows?

What is a reasonable but too low estimate? _____ 140 (Possible student response: *through the window of the bag I count in groups of 10 and I know there are more than 100*)

What is a reasonable but too high estimate? _____ 650 (Possible student response: *this could be my too high estimate because I know a jelly bean is about 1g and I believe mini marshmallows are less than 1g. I noticed this bag is 400g so I believe there are a lot more than 400. I don't think there is double that amount though.*)

What information would be helpful to know for solving this investigation? (*I would need to know how many marshmallows in part of the bag to help me figure out how many marshmallows might be in the full bag.*)



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Performance Task:

How many mini marshmallows might be in a full bag of marshmallows?



Island Numeracy Assessment Grade 3+: Number Sense

Performance Task:



This is a 400g bag of mini marshmallows

What is a reasonable but too low estimate? _____

What is a reasonable but too high estimate? _____

Using pictures, numbers and words, show how many mini marshmallows are in the full bag



75 mini marshmallows = 50 g

A full bag has about 600 marshmallows.

If 50 g = 75 mini marshmallows I can figure out that there are 150 marshmallow in 100g. If I multiply 150 by 4 it equals 600

or

If I skip count on a number line I can make skips of 50 eight times and that would equal one bag (400g). Then I need to skip count eight times by 75 to figure out how many are in a full bag. 0,75,150,225,300,375,450,525,600.



In 100g there are 150 marshmallows. If I figure out 4 groups of 150 I will have the total number of marshmallows.