MARS Tasks (Grade 1)

Numbers and Operations in Base Ten (NBT)

2012 **Kim's Numbers**: identifies value of each digit in a two-digit number; places numbers on a number line

2012 **At the Pet Store**: solves word problems involving groups of tens and left over amounts; puts numbers in order from smallest to largest

2013 **Birthday Party**: solves word problems involving groups of tens and left over amounts; puts missing numbers in a hundred's chart

2013 **Shape Patterns**: completes missing numbers in number patterns

2014 **Field Day**: adds or subtracts players within 20; subtracts larger numbers using multiples of ten; shows how the solution was reached

2015 **Three Bridges for Three Bikers**: adds two-digit numbers within 100; matches totals with using constraints that are given

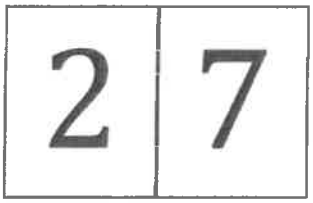
2016 **Weather**: solves addition and subtraction problems within 100; shows how the solution was reached

2016 **Butterflies**: solves addition and subtraction problems within 100; shows how the solution was reached; adds three whole numbers; shows understanding of the equal sign (Note: This also fits with Operations and Algebraic Thinking)

Kim's Numbers

Kim had 2 number cards, a 2 and a 7

Kim makes this number with the two cards.

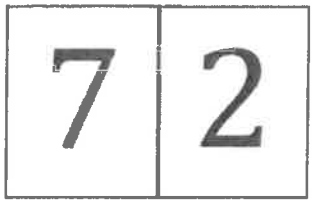


1. How many groups of ten are there in this number?_____
   How do you know?

_____

_____

Kim makes this number with the two cards.



2. How many ones are there in this number? _____
   How do you know?

_____

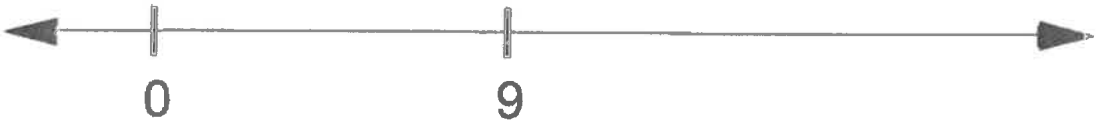
_____

3. Which number is bigger? _____
Explain how you know.

_____

_____

Kim's teacher drew a number line on the board.



4. About where would 7 be? Place 7 on the number line where it belongs.

5. About where would 20 be? Place 20 on the number line where it belongs.

6. About where would 5 be? Place 5 on the number line where it belongs.

Tell Kim how you knew where to place 7 and why.

_____

_____

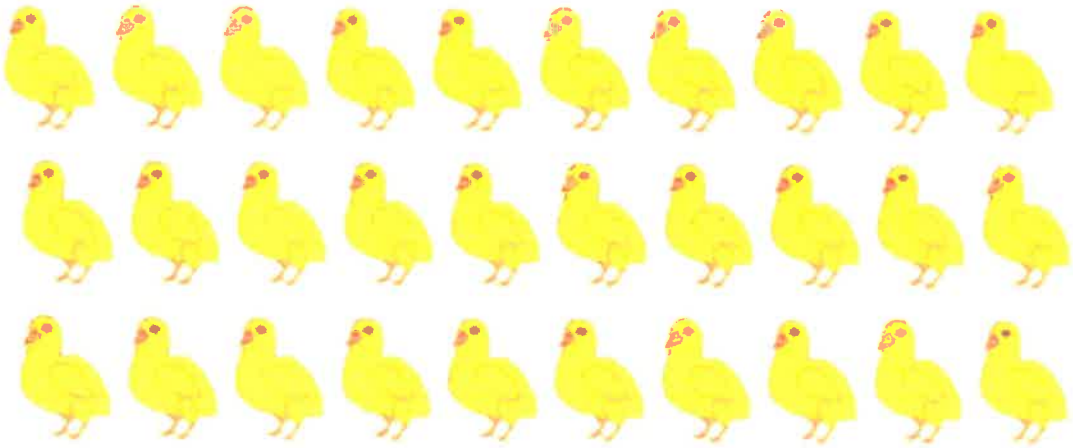
Mathematics Assessment Collaborative

Performance Assessment Rubric Grade 1

	Kim's Numbers: Grade 1	Points	Section Points
	The core elements of the performance required by this task are: • Use operations to solve problems • Understand and apply properties of numbers • Compose and decompose numbers in flexible ways Based on these credit for specific aspects of performance should be assigned as follows		
1.	Gives correct answers: 2 with some correct reasoning	1	1
2.	Gives correct answers: 2 with some correct reasoning	1	1
3.	Gives a correct answer: 72 Tells how student knows such as: 7 tens is bigger than 2 tens	1 1	2
4.	Shows a correct answers such as: Indicates 7 is between 0 and 9	1	1
5.	Shows a correct answers such as: Indicates 20 is to the right of 9	1	1
6.	Shows a correct answer such as: Indicates 5 is between 0 and 7 Tells how student knows such as: Close to the 9	1 1	2
	Total Points		8

At the Pet Store

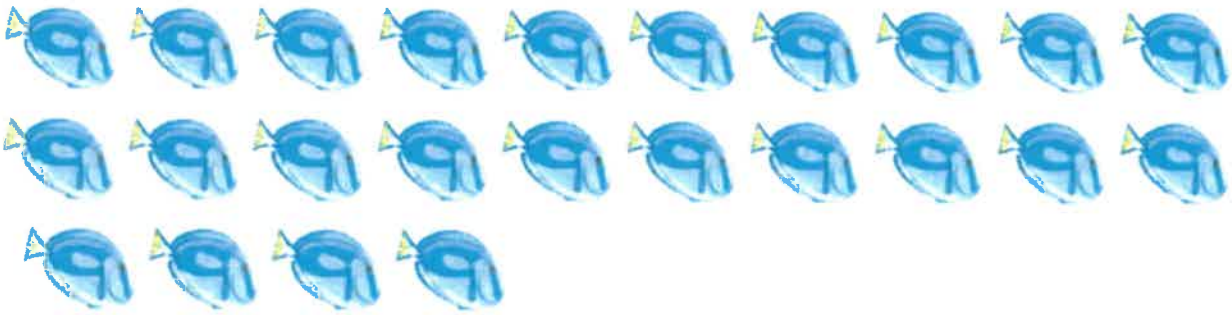
Angela works at the Pet Store. Here are the birds in the store.



Angela puts ten birds in each large cage.
Draw a circle around each group of ten.

1. How many cages will Angela need for these birds? _____

These are fish in the store.



Angela puts ten fish in each tank.
She takes home any left over fish.

2. How many fish tanks does she need? _____ tanks

3. How many fish will she take home? _____ fish

Angela has a number card for each puppy in the store.

22

9

4

6

7

2

18

4. Put the cards in order. Begin with the smallest number.

8

Mathematics Assessment Collaborative

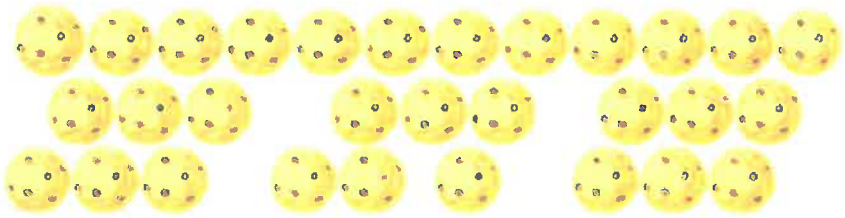
Performance Assessment Rubric Grade 1

	At the Pet Store: Grade 1	Points	Section Points
	The core elements of the performance required by this task are: • Use group of tens to solve problems • Determine remainders that are not groups in ten • Order numbers from smallest to largest Based on these credit for specific aspects of performance should be assigned as follows		
1.	Show a correct answer: Circles 3 groups of ten birds Gives a correct answer: **3**	1 1	2
2.	Gives a correct answer: **2** tanks	2	2
3.	Gives a correct answer: **4** fish	1	1
4.	Put the cards in order: **2, 4, 6, 7, 9, 18, 22** All seven in correct order six or five in correct location four or three in correct location	 3 (2) (1)	3
	Total Points		8

Birthday Party
MAC Assessment Task

It is Mr. Robb's birthday. His class shares cookies and cupcakes and plays games.

Celia will put these cookies in trays. Each tray holds 10 cookies.
Draw a circle around each group of ten.



1. How many trays will Celia need for the cookies? _____ trays

2. How many cookies in all? _____ cookies

Evan will put these cupcakes on plates. Each plate holds 10 cupcakes.
Draw a circle around each group of ten. Mr. Robb will take the extras home.

3. How many plates will Evan need for the cupcakes? _____ plates

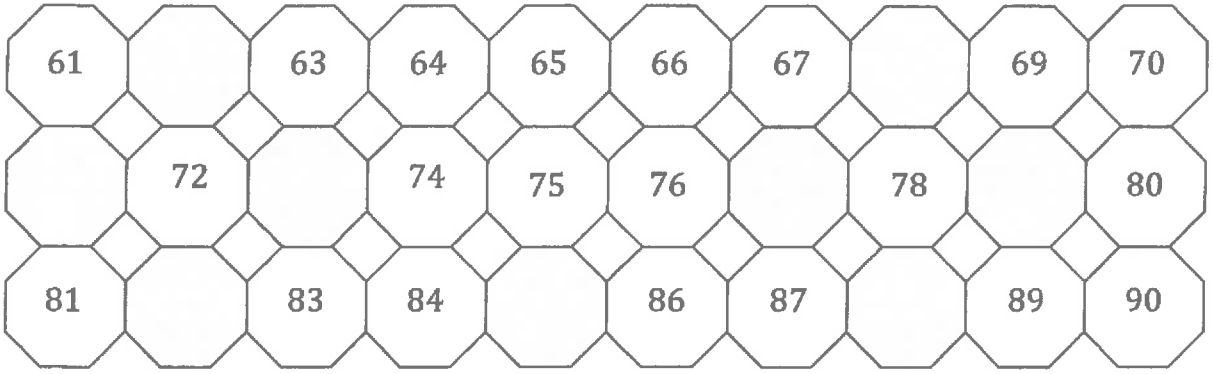
4. How many cupcakes will Mr. Robb take home? _____ cupcakes

5. How many cupcakes in all? _____ cupcakes

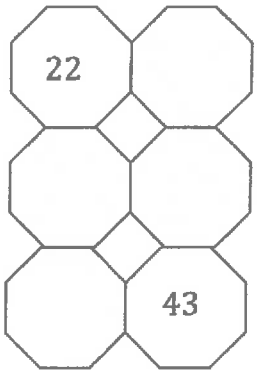
Time for a game! Help the children find the missing numbers on the 100s chart.

6. Fill in the grey shapes below with the missing numbers.

100s Chart Game



The class found this part of the 100s chart on the floor. Put your finger on the number 43. What number goes one shape above the 43?



7. Tell Mr. Robb what number goes one shape above 43. _____

How do you know you have the correct number?

_____

_____

10

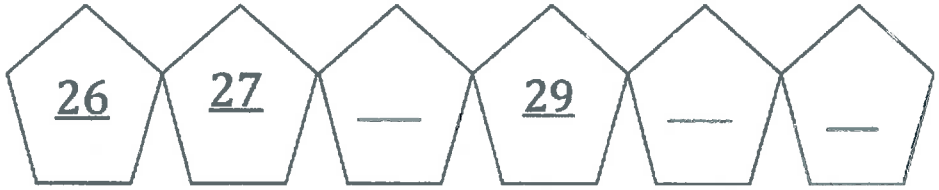
2013 MAC Rubrics Grade 1

Birthday Party	Rubric	
The core elements of performance required by this task are: • Student work is characterized by demonstrating the understanding that the two digits of a two-digit number represent amounts of tens and ones. (1.NBT.2) • Student work is characterized by explaining how to mentally add 10 more or 10 less to a number and to explain the reasoning used. (1.NBT.5) • Student work is characterized by determining viable arguments and critiquing the reasoning of others. (MP 3) • Student work is characterized by attending to precision. (MP6) Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Gives the correct answers: Circles **3 groups of 10** and **3** trays	1 1	2
2. Gives the correct answer: **30** cookies	1	1
3. Gives the correct answers: Circles **3 groups of 10** and **3** plates (accept 4 plates)	1	1
4. Gives the correct answer: **4** cupcakes	1	1
5. Gives the correct answer: **34** cupcakes	1ft	1
6. Gives the correct answers: **62, 68, 71,73,77,79,82,85,88** All 9 answers correct 8 or 7 correct	 2 (1)	2
7. Gives the correct answer: **33** Give a correct explanation such as: 10 more then you get to 43 or I know 30 goes above 40 so 33 is above 43.	1 1	2
Total Points		**10**

Shape Patterns
MAC Assessment Task

Each row of shapes has a number pattern. Fill in the missing numbers for each pattern.

1.



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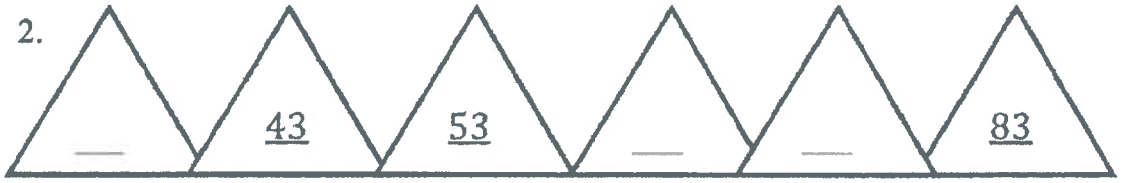

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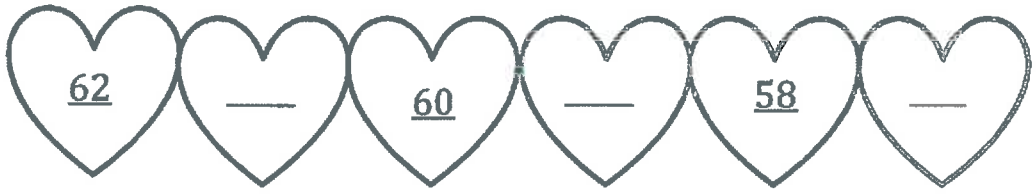


4.

2013 MAC Rubrics Grade 1

Shape Patterns	Rubric	
The core elements of performance required by this task are: • Student work is characterized by reading and writing number patterns successfully. (1.NBT.1) • Student work is characterized by finding two-digit numbers that are 1 more, 1 less, 10 more, 10 less and counting backwards. (1.NBT.5) • Student work is characterized by explaining to themselves the meaning of a problem and finding an entry point to its solution. (MP1) • Student work is characterized by looking for the structure in number patterns. (MP7) Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Fills in the missing numbers in the pentagons with: **28, 30** and **31** 2 or 1 correct	2 (1)	2
2. Fills in the missing numbers in the triangles with: **33, 63,** and **73** 2 or 1 correct	2 (1)	2
3. Fills in the missing numbers in the hearts with: **61, 59, 57** 2 or 1 correct Or: Finds a repeating pattern using given numbers correctly	2 (1) or 2	2
4. Fills in the missing numbers in the hexagons with: **54, 44,** and **34** 2 or 1 correct Or: Finds a repeating pattern using given numbers correctly	2 (1) or 2	2
Total Points		**8**

Field Day
MAC Assessment Task

The first grade students at Cesar Chavez Elementary School are planning a field day. They need help in figuring out how many children will play in each activity.

Some students want to play soccer:

Room Number	Number of Soccer Players
10	7
12	5
13	3

1. How many students want to play soccer? _____

2. 10 students have signed up to play basketball. If 7 more students sign up how many will be playing basketball altogether?

   _____ in all

   Show how you got your answer.

3. 20 students are playing kickball. After one hour, 13 students left. How many students are still playing kickball?

_____ students

Show how you got your answer.

4. The students take out 60 balls for field day. At the end of the day they return 40 balls. How many balls are missing?

_____ missing balls

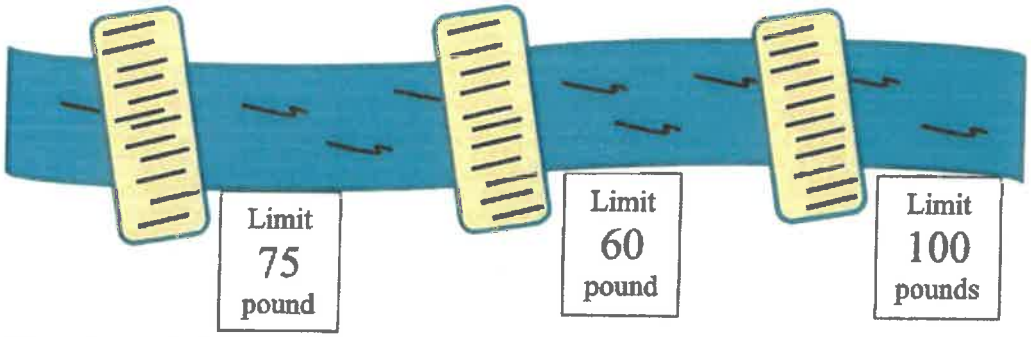
Show how you got your answer.

2014 MAC Rubrics Grade 1

Field Day	Rubric	
The core elements of performance required by this task are: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. (1.OA.2) Add within 100, including adding a two-digit umber and a one digit number, and adding a two-digit number and a multiple of 10. (1.NBT.4) Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90. (1.NBT.6) Make sense of problems and persevere in solving them. (MP 1) Construct viable arguments and critique the reasoning of others. (MP 3) Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Gives the correct answer: **15**	1	1
2. Gives the correct answer: **17** Shows work such: as $10 + 7 = 17$	1 1	2
3. Gives the correct answer: **7** Shows work such as: $20 - 13 = 7, 13 + 7 = 20$	1 1	2
4. Gives the correct answer: **20** Shows work such as: $60\text{-}40 = 20, 40 + 20 = 60$	1 1	2
Total Points		7

Three Bridges for Three Bikers

Help the bikers get across the bridges. Only one biker may cross each bridge.



Find the weight for each of the bikes and their bike riders.

1. 

Show or explain your work:

bike 22 pounds
rider 45 pounds

2. 

Show or explain your work:

bike 30 pounds
rider 69 pounds

3. 

Show or explain your work:

bike 10 pounds
rider 31 pounds

Each must weigh less than the limit on the bridge.

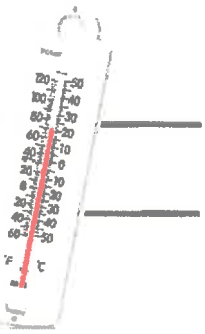
4. Draw a line from each biker to the biker's bridge.

9

2015 MAC Rubrics Grade 1

Three Bridges for Three Bikers	Rubric	
The core elements of performance required by this task are: *student work is characterized by adding within 100 including a two-digit number and a one-digit number and by adding a two-digit number with a multiple of 10 (1.NBT.4) *student work is characterized by mentally finding 10 more than a given two-digit number without counting and with explaining the reasoning used (1.NBT.5) *student work is characterized by continuing to develop the ability to focus attention, remain flexible and persevere (MP1) *student work is characterized by modelling real-life situations with number sentences or equations (MP4) Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Gives correct answer: **67** pounds Shows work such as: $22 + 45 = 67$	1 1	2
2. Gives correct answer: **99** pounds Show work such as: $69 + 30 = 99$	1 1	2
3. Gives correct answer: **41** pounds Shows work such as: $31 + 10 = 41$	1 1	2
4. Draws a correct line from biker 1 to first bridge Draws a correct line from biker 2 to last bridge Draws a correct line from bike 3 to middle bridge	3 x 1	3
Total Points		**9**

Weather



1. Mrs. Lindsey's class recorded the temperature for 5 days in April and 3 days in May. How many days did they record the temperature?

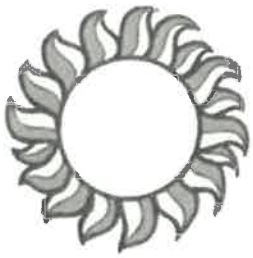
_____ days

2. On Monday the temperature was 60 degrees. On Tuesday the temperature was 10 degrees warmer. What was the temperature on Tuesday?

_____degrees

3. On Wednesday the temperature was 74 degrees. On Thursday it was 20 degrees cooler. What was the temperature on Thursday? Show how you know.

_____degrees



4. In April there were 27 rainy days and in May there were 5 rainy days. How many total rainy days were there in April and May? Show how you know.

_____days

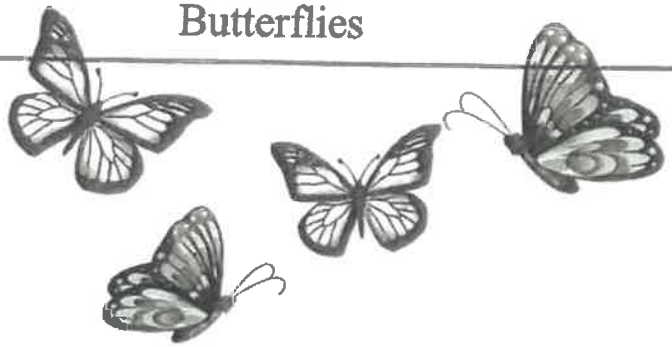
5. The weather man predicts a total of 13 rainy days in May. If his prediction is correct, how many more rainy days will there be in May? Remember we have had 5 rainy days in May so far. Show how you know.

_____more rainy days

2016 MAC Rubric Grade 1

Weather	Rubric	
The core elements of performance required by this task are: *student work is characterized by using addition and subtraction within 20 to solve word problems (1.OA.1) *student work is characterized by adding within 100, including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value (1.NBT.4) *student work is characterized by finding ten more or ten less than a given number (1.NBT.5) *student work is characterized by * student work is characterized by reasoning abstractly and quantitatively (MP2) *student work is characterized by modelling with mathematics (MP4) Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Gives correct answer: **8**	1	1
2. Gives correct answer: **70**	1	1
3. Gives correct answer: **54** Shows work such as: $74 - 20 = 54$, accept drawings	1 1	2
4. Gives correct answer: **32** Shows work such as: $27 + 5 = 32$, accept drawings	1 1	2
5. Gives correct answer: **8** Shows work such as: $5 + 8 = 13$, $13 - 5 = 8$	1 1	2
Total Points		**8**

Butterflies



1. First graders are studying butterflies. Sean's classroom has 4 butterfly habitats. Andrew's class has 5 butterfly habitats. How many butterfly habitats are there altogether?

_____ habitats

2. Sean's class has 8 yellow and 3 red milkweed leaves to feed the caterpillars. Andrew's class has 3 yellow and 8 red milkweed leaves. Sean says they have the same number of leaves. **Do you agree?** Show how you know.

Yes or No

3. There are 28 caterpillars in Sean's classroom and 10 more in Andrew's classroom. How many caterpillars are in Andrew's classroom? Show how you know.

_____ caterpillars

4. Sean found 6 more caterpillars outside under the oak tree. The teacher let him add them to their caterpillar habitat. How many caterpillars does Sean's class have now? Remember they started with 28 caterpillars. Show how you know.

_____caterpillars

5. After 4 weeks, the caterpillars started hatching from a few habitats. Sean said in his class they have 5 + 4 caterpillars that have hatched. Andrew said in his class they have 3 + 6 caterpillars that have hatched.

Sean said they have the same number of caterpillars hatching. **Do you agree with Sean?** Show how you know.

Yes or No

2016 MAC Rubric Grade 1

Butterflies		Rubric
The core elements of performance required by this task are: *student work is characterized by using addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions (1.OA.1) *student work is characterized by understanding the meaning of the equal sign and determine if equations involving addition and subtraction are true or false (1.OA.7) *student work is characterized by determining the unknown whole numbers in an addition or subtraction equation relating to three whole numbers (1.OA.8) *student work is characterized by finding ten more or ten less than a given number (1.NBT.5) *student work is characterized by making sense of problems and persevering in solving them (MP1) * student work is characterized by constructing viable arguments and critiquing the reasoning of others (MP 3) Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Gives correct answer: **9** habitats	1	1
2. Gives correct answer: such as $8 + 3 = 3 + 8$, it is a "turn around" fact	1	1
3. Gives correct answer: **38** caterpillars Shows work such as: $28 + 10 = 38$	1 1	2
4. Gives correct answer: 34 shows work such as: $28 + 6 = 34$	1 1	2
5. Gives correct answer: Yes **and** $5 + 4 = 9$ and $3 + 6 = 9$	2	2
Total Points		**8**