

Midterm Test

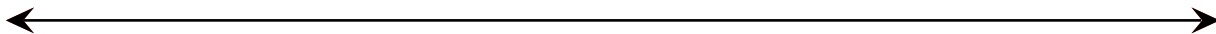
Part 1

For Part 1, do not use a calculator. You may refer to the *Writing Numbers in Word* page in the Reference section of your *Student Guide*.

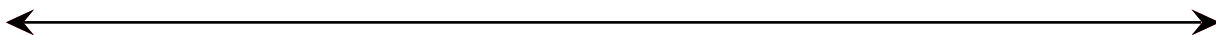
- A.** The number of people who can attend a football game in the Rose Bowl is 92,542. Write this number in words.

B. What does the 9 represent in 92,542? _____
- A.** A soccer stadium in Barcelona, Spain seats 98,787 people. A soccer stadium in Mexico City, Mexico seats 105,000 people. Which stadium seats more people, the one in Spain or the one in Mexico?

B. Estimate the difference in the number of seats in the two stadiums. Show or tell how you made your estimate.
- A.** Show how a base-ten hopper can move from 126 to 398. Write a number sentence to match.

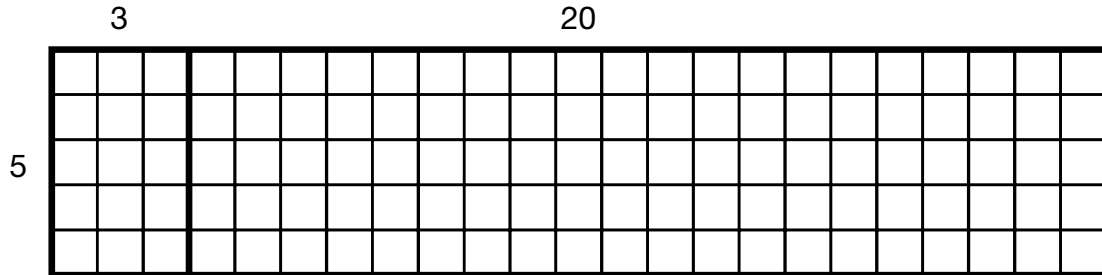


- B.** Show how a base-ten hopper can move from 1000 back to 874. Write a number sentence to match.



4. **A.** Grace drew the rectangle below and broke it into parts to help her find 5×23 using the break-apart method.

- Write number sentences on each part to show the number of squares in each.

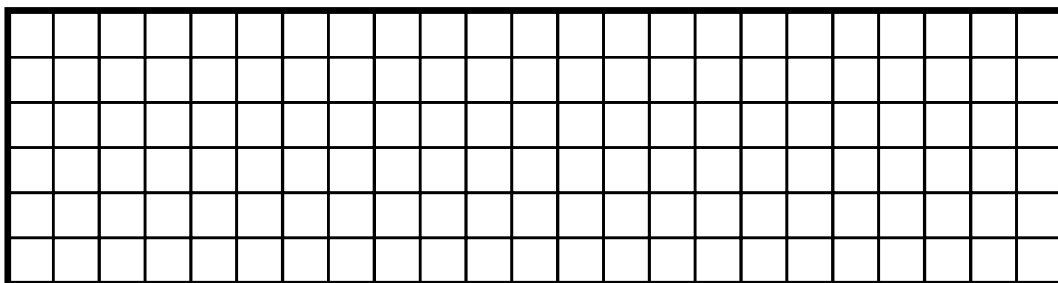


- Write a number sentence to show how to put the two parts together to get the total number of squares in the large rectangle.

Number Sentence: _____

B. Show another way to break the rectangle apart to solve 5×23 so that it is easy to multiply.

- Write number sentences on each part to show the number of squares in each.



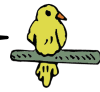
- Write a number sentence to show how to put the parts together to get the total number of squares in the large rectangle.

Number Sentence: _____

- Solve Questions 5–10 using paper and pencil or mental math. Estimate to be sure your answers are reasonable.
- Show how to solve two problems using mental math.
- You may use the *Addition, Subtraction, and Multiplication Strategies Menu* pages in the Reference section in your *Student Guide*.

5.
$$\begin{array}{r} 1816 \\ + 277 \\ \hline \end{array}$$

Which two problems will you choose to solve with mental math?



6. $3000 - 2897 =$

7.
$$\begin{array}{r} 2094 \\ - 269 \\ \hline \end{array}$$

8. $43 \times 5 =$

9.
$$\begin{array}{r} 28 \\ \times 7 \\ \hline \end{array}$$

10. Show how you know your answer to Question 5 is reasonable.

Part 2

For Questions 11–22, you may use any of the tools you have used in class. For example, you may use a ruler, calculator, or square-inch tiles.

- 11.** Jerome collected 34 red pencils and 29 blue pencils to donate to a school. Jerome and six of his friends each collected the same amount. How many pencils were donated? Show or tell how you solved the problem.
- 12.** Replace n with a number to make each number sentence true.
A. $900 + 70 + 4 = 800 + n + 4$ **B.** $1000 = 654 + 300 + 50 - n$
- 13.** Tom made a rectangle with 36 tiles. If there are 4 rows, how many tiles are in each row? Show how you found your answer.
- 14. A.** Is 4 a factor of 24? Show or tell how you know.
- B.** Is 4 a factor of 27? Show or tell how you know.

Name _____ Date _____

- 15.** Guess my number. I am a multiple of 3 and 5. I am between 10 and 40. I am an odd number. What number am I?

Show or tell how you solved the riddle. Use Math Practices Expectation 5.

	Yes ...	Yes, but ...	No, but ...	No ...
<p>MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.</p>				

- 16. A.** Is 27 a prime number? Show or tell how you know.
- B.** Is 29 is a prime number? Show or tell how you know.
- 17. A.** In the last five weeks, Frank read the following number of books each week: 5, 2, 6, 4, 3. Find the median number of books he read for the five weeks.
- B.** Find the mean number of books Frank read for the five weeks.
- 18. A.** In the last six weeks, Lee Yah read the following number of books each week: 1, 7, 7, 1, 1, 3. Find the median number of books she read for the six weeks.
- B.** Find the mean number of books Lee Yah read for the six weeks.
- 19.** Use the medians and means from Questions 17 and 18. Predict who will read more books next week, Lee Yah or Frank. Explain your thinking.

- 20. A.** Michael went for a day-long bike ride. He recorded the data in the table for the number of miles he rode. Fill in the table with the ordered pairs.
- B.** Make a point graph of the data. Choose a scale that will leave room to make predictions.
- C.** If the points lie close to a straight line, use a ruler to draw a best-fit line.

Bike Trip

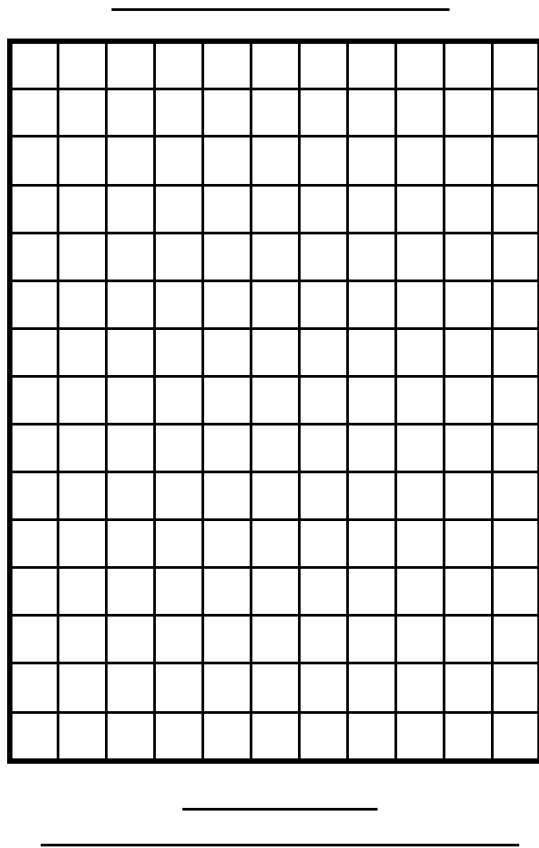
<i>T</i> Time in Hours	<i>D</i> Distance in Miles	Ordered Pairs (<i>T</i> , <i>D</i>)
1	7	(1, 7)
2	12	
4	26	

- 21.** Use the data table or graph in Question 20 to make the predictions below. Show your work on the graph or explain your thinking.

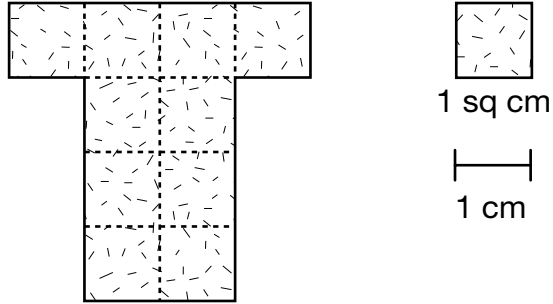
A. Predict the number of miles Michael rode in three hours.



B. Predict the number of miles he rode in five hours.

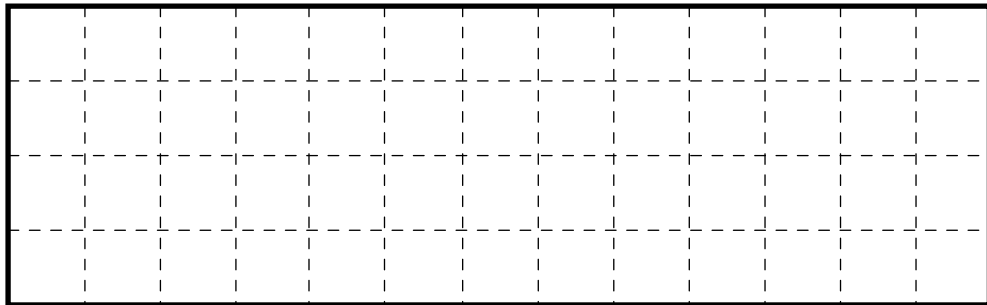


22. A. What is the area of the shape below? _____



B. What is the perimeter?

C. Draw another shape with the same area as the shape above, but with a greater perimeter.



What is the perimeter? _____

Name _____ Date _____

Midterm Test

Part 1

For Part 1, do not use a calculator. You may refer to the *Writing Numbers in Word* page in the Reference section of your *Student Guide*.

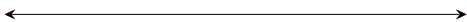
1. A. The number of people who can attend a football game in the Rose Bowl is 92,542. Write this number in words.

- B. What does the 9 represent in 92,542? _____

2. A. A soccer stadium in Barcelona, Spain seats 98,787 people. A soccer stadium in Mexico City, Mexico seats 105,000 people. Which stadium seats more people, the one in Spain or the one in Mexico?

- B. Estimate the difference in the number of seats in the two stadiums. Show or tell how you made your estimate.

3. A. Show how a base-ten hopper can move from 126 to 398. Write a number sentence to match.



- B. Show how a base-ten hopper can move from 1000 back to 874. Write a number sentence to match.

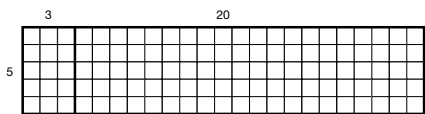


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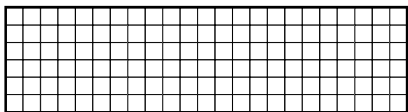
4. A. Grace drew the rectangle below and broke it into parts to help her find 5×23 using the break-apart method.
 - Write number sentences on each part to show the number of squares in each.



- Write a number sentence to show how to put the two parts together to get the total number of squares in the large rectangle.

Number Sentence: _____

- B. Show another way to break the rectangle apart to solve 5×23 so that it is easy to multiply.
 - Write number sentences on each part to show the number of squares in each.



- Write a number sentence to show how to put the parts together to get the total number of squares in the large rectangle.

Number Sentence: _____

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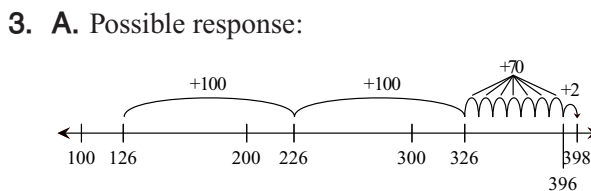
Midterm Test Part

1 (TG pp. 1–3)

Questions 1–10

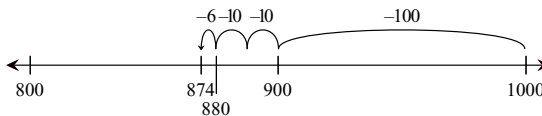
1. A. Ninety-two thousand, five hundred forty-two
- B. 90,000

2. A. The stadium in Mexico seats more people.
- B. Possible response:
5,000; 98,787 is close to 1000,000.
 $105,000 - 100,000 = 5,000$



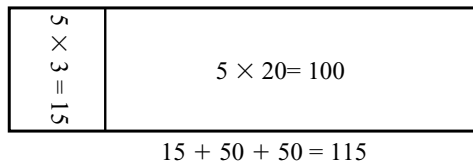
$$126 + 200 + 70 + 2 = 398$$

- B. Possible response:

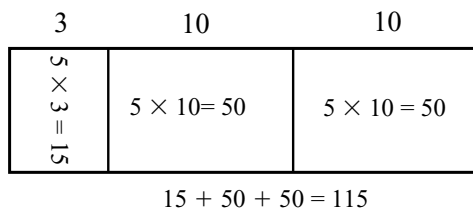


$$1000 - 100 - 20 - 6 = 874$$

4. A.



- B. Possible response:



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For Questions 5–9, one possible mental math strategy is given for each.

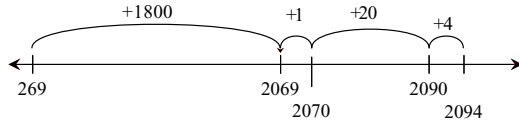
5. 2093 ; $1800 + 200 = 2000$, $2000 + 77 = 2077$
and $2077 + 10 = 2087$ and $2087 + 6 = 2093$

6. 103 ; $2897 + 3 = 2900$

$2900 + 100 = 3000$

$3 + 100 = 103$

7.



8. 215 ; $40 \times 5 = 200$

$3 \times 5 = 15$

$200 + 15 = 215$

9. 196 ; $30 \times 7 = 210$

$2 \times 7 = 14$

$210 - 14 = 196$

10. Possible response: $1800 + 300 = 2100$, which is close to 2093 .

Part 2 (TG pp. 4–8)

Questions 11–22

11. 441 pencils; $34 + 29 = 63$, $63 \times 7 = 441$

12. A. 170

B. 4

13. 9 tiles; Possible strategy: $4 \times n = 36$, $n = 9$; or $36 \div 4 = 9$ tiles.

14. A. Yes, $4 \times 6 = 24$ or I can make a rectangle of four rows of six.


B. No; Possible response: $4 \times 6 = 24$, and $4 \times 7 = 28$, so you can't multiply 4 by any whole number to get 27. The only factors of 27 are 1, 3, 9, and 27. Or I can not arrange 27 tiles into 4 rows evenly.

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Name _____ Date _____

- Solve Questions 5–10 using paper and pencil or mental math. Estimate to be sure your answers are reasonable.
- Show how to solve two problems using mental math.
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5. 1816
 $+ 277$

Which two problems will you choose to solve with mental math? 

6. $3000 - 2897 =$

7. 2094
 $- 269$

8. $43 \times 5 =$

9. 28
 $\times 7$

10. Show how you know your answer to Question 5 is reasonable.

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Name _____ Date _____

Part 2

For Questions 11–22, you may use any of the tools you have used in class. For example, you may use a ruler, calculator, or square-inch tiles.

11. Jerome collected 34 red pencils and 29 blue pencils to donate to a school. Jerome and six of his friends each collected the same amount. How many pencils were donated? Show or tell how you solved the problem.

12. Replace n with a number to make each number sentence true.
A. $900 + 70 + 4 = 800 + n + 4$ B. $1000 = 654 + 300 + 50 - n$

13. Tom made a rectangle with 36 tiles. If there are 4 rows, how many tiles are in each row? Show how you found your answer.

14. A. Is 4 a factor of 24? Show or tell how you know.
B. Is 4 a factor of 27? Show or tell how you know.

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15. Guess my number: I am a multiple of 3 and 5. I am between 10 and 40. I am an odd number. What number am I? Show or tell how you solved the riddle. Use Math Practices Expectation 5.

<p>M.P.5: Show my work. Show my answer so someone else can understand my thinking.</p>	Yes...	No, but ...	No...

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15. 15; Possible response: First I listed all the multiples of 3 between 10 and 40. Those are 12, 15, 18, 21, 24, 27, 30, 33, 36, 39. From those I found all the numbers that were also multiples of 5. Those are 15 and 30. Of those two, only 15 is an odd number.

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Name _____ Date _____

16. A. Is 27 a prime number? Show or tell how you know.

B. Is 29 is a prime number? Show or tell how you know.

17. A. In the last five weeks, Frank read the following number of books each week: 5, 2, 6, 4, 3. Find the median number of books he read for the five weeks.

B. Find the mean number of books Frank read for the five weeks.

18. A. In the last six weeks, Lee Yah read the following number of books each week: 1, 7, 7, 1, 1, 3. Find the median number of books she read for the six weeks.

B. Find the mean number of books Lee Yah read for the six weeks.

19. Use the medians and means from Questions 17 and 18. Predict who will read more books next week, Lee Yah or Frank. Explain your thinking.

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16. A. No; $3 \times 9 = 27$
 B. Yes; the only factors of 29 are 1 and 29.

17. A. 4 books
 B. 4 books

18. A. 2 books
 B. 3 books, to the nearest whole book.

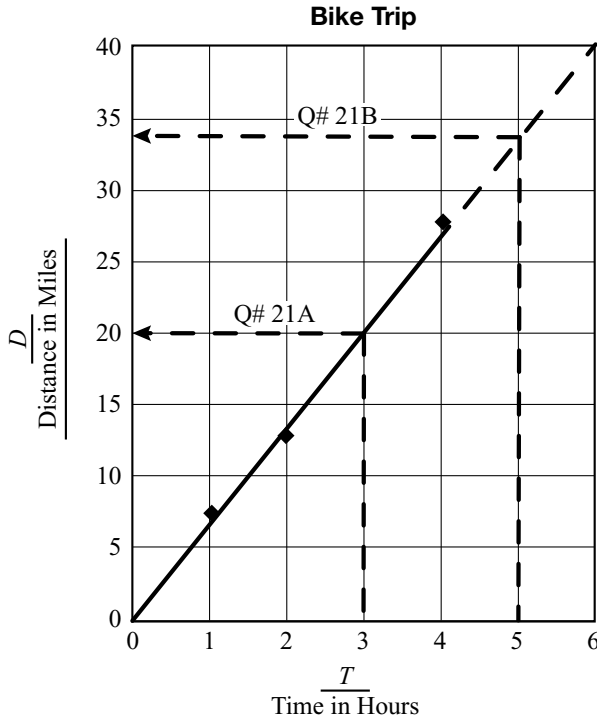
19. Possible response: Frank because both his median and mean were higher than Lee Yah's; Frank read 20 books in 5 weeks while Lee Yah read 20 books in 6 weeks.

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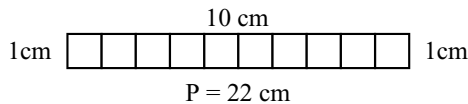
20. A.

T Time in Hours	D Distance in Miles	Ordered Pairs (T, D)
1	7	(1, 7)
2	12	(2, 12)
4	26	(4, 26)

B–C.



21. A. Around 20 miles; Accept predictions between 17 and 23 miles. See graph.
 B. Around 33 miles; Accept predictions between 30 and 35 miles. See graph.
22. A. 10 square centimeters
 B. 16 centimeters
 C. Responses will vary. The maximum perimeter is 22 cm.



Name _____ Date _____

20. A. Michael went for a day-long bike ride. He recorded the data in the table for the number of miles he rode. Fill in the table with the ordered pairs.

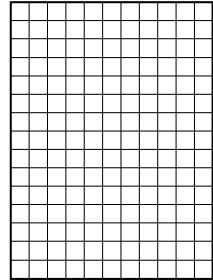
Bike Trip		
T Time in Hours	D Distance in Miles	Ordered Pairs (T, D)
1	7	(1, 7)
2	12	
4	26	

- B. Make a point graph of the data. Choose a scale that will leave room to make predictions.
 C. If the points lie close to a straight line, use a ruler to draw a best-fit line.

21. Use the data table or graph in Question 20 to make the predictions below. Show your work on the graph or explain your thinking.

A. Predict the number of miles Michael rode in three hours.

B. Predict the number of miles he rode in five hours.



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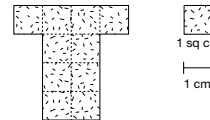
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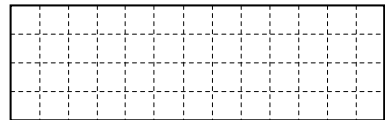
Name _____ Date _____

22. A. What is the area of the shape below? _____



B. What is the perimeter?

C. Draw another shape with the same area as the shape above, but with a greater perimeter.



What is the perimeter? _____

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