Hello Forest Hills Middle School
We are in strange times so we are doing what we can to get by. Work on the math packets for your grade level. If you want more there are ones for other grades also. There is also a menu of math related activities you can try.

What if I struggle with the work? Please be aware that the math packet does not come with additional examples and/or instructions. We suggest that if you run into difficulty with certain concepts and/or problems that you seek out advice from family and friends, previous math tutors, or utilize online resources such as Khan Academy.

Sincerely,

Andrew McKendry
Forest Hills Consolidated School
Jackman, Maine 04945
Mid-Year Review
Test Prep

Multiple Choice

Fill in the circle next to the correct answer.

1. In the number 6,592, the digit 5 is in the ________ place. (Lesson 1.2)
   A ones  B tens  C hundreds  D thousands

2. Which number is 1,000 more than 1,629? (Lesson 1.3)
   A 629  B 1,619  C 1,729  D 2,629

3. Estimate the sum of 342 and 525. Use front-end estimation. (Lesson 2.5)
   A 300 + 500 = 800  B 300 + 530 = 830  
   C 340 + 500 = 840  D 340 + 530 = 870

4. Estimate the difference between 828 and 535.
   Use rounding to the nearest hundred. (Lesson 2.4)
   A 900 - 500 = 400
   B 800 - 500 = 300
   C 900 - 600 = 300
   D 800 - 600 = 200
5. \( 0 \times 9 = \) ________ (Lesson 6.1)
   A 0  B 9  C 90  D 900

6. To find the answer to \( 38 + 48 \), You can add 50 to ________.
   (Lesson 2.1)
   A 38, then add 2  B 38, then subtract 2
   C 48, then add 2  D 48, then subtract 2

7. What is the missing digit? (Lesson 3.3)
   \[
   5, \quad 3, \quad 2, \quad \square \\
   + \quad 3, \quad 6, \quad \square, \quad 4 \\
   \square, \quad 0, \quad 2, \quad 3
   \]
   A 1  B 2  C 5  D 9

8. There are four numbers on a whiteboard:
   1,390, 1,125, 1,580, and 1,625.
The difference between two of the numbers is 235.
What are the two numbers? (Lesson 4.3)
   A 1,580 and 1,390  B 1,625 and 1,390
   C 1,390 and 1,125  D 1,580 and 1,125
9. How many numbers between 31 and 50 can be divided by 6 with no remainder? (Lesson 8.4)
   A 1  B 2  C 3  D 4

10. Add 4,786 and 1,078. (Lesson 3.3)
    A 3,708  B 3,808  C 5,764  D 5,864

11. Subtract 1,786 from 3,000. (Lesson 4.3)
    A 1,204  B 1,214  C 2,786  D 4,786

12. $215 \times 4 =$ (Lesson 7.3)
    A 172  B 211  C 219  D 860

13. Which of the following is the same as $5 \times 9$? (Lesson 6.5)
    A $9 + 5$  B $5 + 5 + 9 + 9$
    C $5 + 5 + 5 + 5 + 5$  D $9 + 9 + 9 + 9 + 9$
14. Drew has 87 pebbles. He divides the pebbles equally into 3 bags. How many pebbles does he have in each bag? (Lesson 8.5)
   \( \begin{array}{c}
   \text{A} \ 29 \\
   \text{B} \ 84 \\
   \text{C} \ 90 \\
   \text{D} \ 261
   \end{array} \)

15. The sum of two numbers is 100. The difference between the two numbers is 26. What is the number that is less? (Lesson 5.1)
   \( \begin{array}{c}
   ? \ 26 \\
   \text{A} \ 13 \\
   \text{B} \ 24 \\
   \text{C} \ 37 \\
   \text{D} \ 63
   \end{array} \)

**Short Answer**

Read the questions carefully. Write each answer in the space provided.

16. Write three thousand, fourteen in standard form. (Lesson 1.1)
17. What is the value of the digit 5 in the number 5,631? (Lesson 1.2)

18. Use the digits below to make three 3-digit odd numbers and three 3-digit even numbers. Do not repeat the same digits in a number. (Lesson 8.3)

1 8 2 3 9 4 7

Odd numbers: ________________________________

Even numbers: ________________________________

19. Add 1,850 + 59. (Lesson 3.2)

20. 70 × 4 = ? (Lesson 7.1)

21. In 59 ÷ 2, the quotient is _________, and the remainder is _________. (Lesson 8.2)
22. Shaun takes 300 photographs at the zoo.
Sheena takes twice as many photographs as Shaun.
How many photographs do they take in all? (Lesson 9.1)

23. Shannon has 78 animal stickers.
She has three times as many animal stickers as her brother, Ryan.
How many animal stickers does Ryan have? (Lesson 9.3)

24. The sum of two numbers is 1,500.
The difference between these two numbers is 300.
Find these two numbers from the numbers provided. (Lessons 3.2 and 4.1):

\[1,200 \ 600 \ 300 \ 700 \ 800 \ 900\]

25. Caroline packs some glue sticks into 8 bags.
She has 12 glue sticks left over.
If there are 25 glue sticks in each bag, how many glue sticks did she have at first? (Lessons 7.3 and 3.1)
26. What is the product of \(1 \times 7 \times 2\)?
Use the number lines to help you. (Lessons 6.1 and 6.2)

\[
1 \times 7 \times 2 = 1 \times \underline{\quad} \\
= \underline{\quad}
\]

\[
0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \quad 13 \quad 14 \quad 15 \quad 16
\]

\[
1 \times 7 \times 2 = \underline{\quad} \times 2 \\
= \underline{\quad}
\]

\[
0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10 \quad 11 \quad 12 \quad 13 \quad 14 \quad 15 \quad 16
\]

So, \(1 \times \underline{\quad} = \underline{\quad} \times 2 \\
= \underline{\quad}
27. Find the sum of 938 and 8,163. *(Lesson 3.3)*

28. Find the difference between 6,215 and 8,356. *(Lesson 4.3)*

29. Find the product of 154 and 4. *(Lesson 7.3)*

30. Use the digits below to form two 2-digit numbers. Each number has a remainder of 1 when divided by 4. *(Lesson 8.2)*

    1 3 7 9

31. Find the difference between $45 \div 5$ and $5 \times 7$. *(Lessons 4.3, 6.3, and 7.1)*
32. Use the model. How many stamps does Alex have? (Lesson 5.1)

50 stamps
Jim

Alex

? 21 stamps

_______ stamps

33. A craft store sells 1,124 fewer pieces of red art paper than blue art paper.
   It sells 2,317 pieces of red art paper.
   How many pieces of red and blue art paper does the craft store sell? (Lessons 3.3 and 4.3)

_______ pieces

34. Ngu walks 250 feet.
   She walks 65 feet more than Pauline.
   How far does Pauline walk? (Lesson 4.3)

_______ feet

35. Oomi makes 4 necklaces.
   She uses 156 beads for each necklace.
   How many beads does she use in all? (Lesson 7.3)

_______ beads
Extended Response

Solve. Show your work.

36. Jolene has 600 wooden beads.
    She has 285 fewer glass beads than wooden beads,
    a. How many glass beads does Jolene have?

```
600
<table>
<thead>
<tr>
<th>wooden beads</th>
</tr>
</thead>
<tbody>
<tr>
<td>? glass beads</td>
</tr>
<tr>
<td>? 285 beads</td>
</tr>
</tbody>
</table>
```

b. How many wooden beads does she have if she uses 150 of them to make necklaces?

```
600 beads
| ? 150 beads |
```
37. Company A gets 3,700 hits on their website. Company B gets 450 fewer hits than Company A.
   a. How many hits does Company B get?
   
   b. How many hits do both companies get in all?
38. Noah swims 80 laps in 5 days.
He swims the same number of laps every day.

a. How many laps does he swim in a day?

b. How many laps does he swim in 4 days?
39. Jose has 88 stickers.
He puts 4 stickers on each bookmark.
He gives all his bookmarks away to his friends.
Each friend receives 2 bookmarks.

a. How many bookmarks does he put stickers on?

b. How many friends does he have?
40. A factory delivers 5 containers of pottery to a store. Each container has 162 pieces of pottery. The store owner discovers 24 pieces of pottery are broken. How many pieces of pottery are not broken?
Multiple Choice

Fill in the circle next to the correct answer.

1. John spends $1.35 on bus fare and $2.50 on food each day. How much does he spend in two days? (Lesson 10.1)
   A $3.85  
   B $6.60  
   C $6.70  
   D $7.70

2. Paige jogs around a 400-meter track 3 times a day. What is the distance she jogs each day? (Lesson 11.2)
   A 400 m  
   B 1 km 200 m  
   C 1 km 400 m  
   D 10 km 200 m

3. Which mass is not the same as the others? (Lesson 11.3)
   A 7,220 g  
   B 7,022 g  
   C 7,000 g + 22 g  
   D 7 kg 22 g

4. Which is incorrect? (Lesson 14.3)
   A \( \frac{1}{2} = \frac{2}{4} = \frac{3}{6} \)
   B \( \frac{1}{3} = \frac{2}{6} = \frac{3}{9} \)
   C \( \frac{2}{3} = \frac{4}{6} = \frac{6}{12} \)
   D \( \frac{2}{2} = \frac{4}{4} = \frac{11}{11} \)
5. Look at the measuring cups. (Lesson 11.4)

Which is correct?

A. There is 500 milliliters more water in X than Y.
B. There is a total of 1,500 milliliters of water in X and Y.
C. Z contains 180 milliliters less water than X.
D. The difference in the volume of water in Y and Z is 170 milliliters.

6. What fraction of the figure is shaded? (Lesson 14.1)

A. $\frac{1}{5}$  
B. $\frac{2}{5}$  
C. $\frac{6}{13}$  
D. $\frac{2}{3}$
7. Look at the line segments. *(Lesson 17.6)*

Which line segments are parallel?

- A. Segments $AB$ and $AF$
- B. Segments $BC$ and $EF$
- C. Segments $AF$ and $BC$
- D. Segments $AB$ and $CD$

8. Which is a polygon? *(Lesson 18.1)*

- A. Figure $W$
- B. Figure $X$
- C. Figure $Y$
- D. Figure $Z$
9. Which tarts weigh the same? (Lesson 15.2)

<table>
<thead>
<tr>
<th>Tarts</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lemon</td>
<td>2 pounds</td>
</tr>
<tr>
<td>Blueberry</td>
<td>3 pounds</td>
</tr>
<tr>
<td>Strawberry</td>
<td>24 ounces</td>
</tr>
<tr>
<td>Peach</td>
<td>32 ounces</td>
</tr>
</tbody>
</table>

A  Lemon and Strawberry  
B  Lemon and Peach  
C  Blueberry and Strawberry  
D  Blueberry and Peach

10. 8 of the 20 buttons in a box are gray. The rest are white. What fraction of the buttons are white? (Lesson 14.6)

A  \( \frac{2}{5} \)  
B  \( \frac{3}{5} \)  
C  \( \frac{4}{5} \)  
D  \( \frac{3}{7} \)
Short Answer

Read the questions carefully. Write your answers in the space provided.

11. Order the fractions from greatest to least. (Lesson 14.4)
   \[
   \frac{1}{4}, \frac{7}{8}, \frac{3}{4}
   \]

12. String A is 28 inches long. String B is 4 feet long. Which is longer? (Lesson 15.1)
   String ________

13. George starts on his science project at 8:25 A.M. He finishes at 10:10 A.M. How long did he take? (Lesson 16.5)
   _______ h _______ min

14. Mrs. Freeman puts 3 cups of lemon juice in a punch bowl. She adds 6 pints of water. How many cups of liquid are there in total? (Lesson 15.3)
   _______ cups
15. Which angles in the figure are less than a right angle? (Lesson 17.3)

Angles ________ and ________

Look at the figures to answer Exercises 16 and 17. (Lesson 19.4)

16. Which figure has a greater area?

Figure ________

17. How much greater?

_________ in.$^2$
18. Which figures are congruent? (Lesson 18.2)

A  

B  

C  

D  

E  

Figures ________ and ________

Look at the line plot to answer Exercises 19 and 20.

Beth surveyed her friends on the number of books they read last week. She drew a line plot to show her data. (Lesson 13.3)

Number of Books Read Last Week

19. How many friends did she survey?

20. How many friends read more than three books last week?
Extended Response

The table and the bar graph show the number of books checked out of a library over five days. Some of the bars on the bar graph were incorrectly drawn.

<table>
<thead>
<tr>
<th>Books Checked Out:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
</tr>
<tr>
<td>Tuesday</td>
</tr>
<tr>
<td>Wednesday</td>
</tr>
<tr>
<td>Thursday</td>
</tr>
<tr>
<td>Friday</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>40</td>
</tr>
</tbody>
</table>

Books Checked Out

<table>
<thead>
<tr>
<th>Number of Books</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Day of the week

Monday Tuesday Wednesday Thursday Friday
Look at the table and bar graph to answer Exercises 21 to 26.

21. Complete the bar graph for Tuesday.

22. One bar on the bar graph was incorrectly drawn for one of the days. On which day is it?

23. Show the correct number of books checked out for that day in the bar graph.

24. How many books were checked out during that week?

___________ books

25. On which day was the number of books checked out twice as many as Monday?

___________

26. Look at the number of books checked out from Monday to Friday. What is the pattern?
Solve. Show your work.

27. After a garage sale, Norman makes $105.50. Julie makes $38.75 more than Norman. Lana makes $19.20 less than Julie. How much does Lana make?

28. Colin uses a wire to make a square. Each side is 6 centimeters long. He then uses the same wire to make a triangle of three equal sides. How long is each side of the triangle?
Solve. Show your work.

29. Pauline went to a party.
She spends 3 hours 25 minutes there.
She goes home at 2:15 P.M.
What time did she go to the party?

Draw a timeline to help you.
Solve. Show your work.

30. A family has two dogs, a husky and a terrier. The husky's mass is 23 kilograms. If he gains 7 kilograms, his mass will be five times that of the terrier. What is the mass of the terrier?
Mid-Year Review
Test Prep

Multiple Choice
Fill in the circle next to the correct answer.

1. 13 thousands + 4 tens + 8 ones in standard form is __________. (Lesson 1.1)
   A 1,348  B 10,348
   C 13,048  D 13,480

2. In the number 83,415 the value of the digit 3 is __________. (Lesson 1.1)
   A 30  B 300
   C 3,000  D 30,000

3. 1,000 more than 37,568 is __________. (Lesson 1.2)
   A 36,568  B 37,468
   C 37,668  D 38,568

4. Estimate 681 – 307 by rounding to the nearest 100. (Lesson 2.1)
   A 300  B 370
   C 374  D 400

5. Which is the greatest common factor of 27 and 45? (Lesson 2.2)
   A 1  B 3
   C 9  D 45

6. Which pair of numbers has both a prime and a composite number? (Lesson 2.2)
   A 4 and 7  B 3 and 13
   C 14 and 28  D 6 and 8
7. What is the sum of the first two multiples of 6? (Lesson 2.3)
   A  3  B  6  C  12  D  18

8. Mr. Finch exercises at the gym every two days. Mr. Chavez exercises at the gym every five days. When will they meet next if they first met on January 5? (Lesson 2.3)
   A  January 7  B  January 10  C  January 15  D  January 25

9. Divide 5,613 by 7. The remainder is ___________. (Lesson 3.4)
   A  1  B  6  C  18  D  81

10. After using 35 jars to store 14 marbles each, Ali has 3 marbles left. How many marbles did he have at first? (Lesson 3.5)
    A  52  B  178  C  490  D  493

11. The table shows the medals different teams won at a competition. (Lesson 4.2)

<table>
<thead>
<tr>
<th>Team</th>
<th>Gold</th>
<th>Silver</th>
<th>Bronze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandcastle</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Coral Reef</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Sunshine</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Sea Horse</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

   At which intersection was one medal won?
   A  Sandcastle and Gold  B  Coral Reef and Silver
   C  Sunshine and Bronze  D  Seahorse and Silver
12. Find the mode.  
\[
\begin{align*}
31 \text{ lb} & \quad 36 \text{ lb} & \quad 21 \text{ lb} & \quad 40 \text{ lb} & \quad 38 \text{ lb} & \quad 40 \text{ lb} \\
A & \quad 31 \text{ lb} & \quad B & \quad 36 \text{ lb} & \quad C & \quad 37 \text{ lb} & \quad D & \quad 40 \text{ lb}
\end{align*}
\]

13. Jim ordered cans of fruit cocktail for his diner for 6 months. 

<table>
<thead>
<tr>
<th>Cans of Fruit Cocktail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stem</strong></td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

\[2|6 = 26\]

What is the median number of cans he ordered?

A  29 cans  \quad B  32 cans  
C  33 cans  \quad D  40 cans

14. A bag contains 5 yellow balls and 3 green balls. Choose the correct word to describe the likelihood of drawing a yellow ball from the bag. 

A  Impossible  \quad B  Certain  
C  More likely  \quad D  Less likely

15. Stacy draws one of these number cards from a bag.

\[
\begin{align*}
12 & \quad 8 & \quad 5 & \quad 16 & \quad 10 & \quad 3
\end{align*}
\]

What is the probability that she draws a number less than 10? 

A  \(\frac{1}{2}\)  \quad B  \(\frac{1}{3}\)  
C  \(\frac{2}{3}\)  \quad D  \(\frac{1}{6}\)
16. Which two fractions have a sum of \( \frac{9}{10} \)? (Lesson 6.1)
   - A) \( \frac{1}{2} \) and \( \frac{4}{10} \)
   - B) \( \frac{1}{2} \) and \( \frac{1}{10} \)
   - C) \( \frac{2}{5} \) and \( \frac{1}{10} \)
   - D) \( \frac{3}{4} \) and \( \frac{6}{6} \)

17. Which mixed number is represented by A on the number line? (Lesson 6.3)
   - A) \( 3\frac{4}{5} \)
   - B) \( 3\frac{2}{3} \)
   - C) \( 4\frac{1}{3} \)
   - D) \( 4\frac{2}{3} \)

18. How many fifths are in \( 2\frac{3}{5} \)? (Lesson 6.4)
   - A) 10
   - B) 11
   - C) 13
   - D) 23

19. Express \( \frac{14}{6} \) as a mixed number in simplest form. (Lesson 6.5)
   - A) \( 1\frac{4}{6} \)
   - B) \( 1\frac{2}{3} \)
   - C) \( 2\frac{2}{6} \)
   - D) \( 2\frac{1}{3} \)

20. Ms. Lee cut a piece of yarn into different fractional parts: \( \frac{1}{12} \), \( \frac{1}{4} \), and \( \frac{5}{12} \). What fraction of the yarn is left? (Lesson 6.7)
   - A) \( \frac{1}{4} \)
   - B) \( \frac{5}{12} \)
   - C) \( \frac{8}{12} \)
   - D) \( \frac{3}{4} \)
Short Answer

Read each question carefully. Write your answer in the space provided. Give your answers in the correct units.

21. Write forty thousand, sixteen in expanded form. (Lesson 1.1)

22. Arrange the numbers in order from least to greatest. (Lesson 1.2)
   6,407  19,999  6,047  20,005

23. Estimate the quotient of \(713 \div 9\). (Lesson 2.1)

24. The table shows the number of people who visited the space ride at a theme park. Complete the table. (Lesson 4.2)

   **Number of Visitors at the Space Ride**
   
<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults</td>
<td>18</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Children</td>
<td>32</td>
<td>38</td>
<td></td>
</tr>
</tbody>
</table>

Use the table to answer Exercises 25 and 26.

25. How many people visited the space ride? (Lesson 4.2) ________

26. What fraction of the people who visited the space ride were children? (Lesson 6.7) ________
The line graph shows the number of visitors at a museum during the course of a day. (Lesson 4.3)

**Visitors at a Museum**

<table>
<thead>
<tr>
<th>Time</th>
<th>9 A.M.</th>
<th>11 A.M.</th>
<th>1 P.M.</th>
<th>3 P.M.</th>
<th>5 P.M.</th>
<th>7 P.M.</th>
<th>9 P.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Visitors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. By how much did the visitor population increase from 1:00 P.M. to 3:00 P.M.? ______________

28. During which interval did the visitor population decrease the most? ______________

29. During which interval did the same number of visitors arrive and depart? ______________
Use the line plot to solve Exercises 30 and 31. *(Lesson 5.2)*

The line plot shows the number of siblings each student in John’s class has.

30. Find the median of the set of data. __________

31. Find the mode of the set of data. __________

Use the stem-and-leaf plot to solve Exercises 32 and 33. *(Lesson 5.3)*

The stem-and-leaf plot shows the number of orchids produced by 10 greenhouse plants in one month.

<table>
<thead>
<tr>
<th>Number of Orchids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stem</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

0|8 = 8

32. The median of the set of data is __________.

33. The outlier of the set of data is __________.
Look at the spinner. Write **more likely**, **less likely**, **equally likely**, **certain**, or **impossible.** Explain your answer. *(Lesson 5.4)*

![Spinner Diagram]

34. The spinner is ____________ to land on an odd number or an even number.

Reason: ____________________________________________________________

The bar graph shows the color of the horses at a horse show.

**Color of Horses at a Show**

![Bar Graph]

35. Which set is more likely to be the one shown in the bar graph? *(Lesson 5.4)*

**Color of Horses at a Show**

<table>
<thead>
<tr>
<th>Color</th>
<th>Black</th>
<th>Brown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set A</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Set B</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Set C</td>
<td>15</td>
<td>34</td>
</tr>
</tbody>
</table>
Answer each question.

36. A bag has 5 red beads, 8 green beads, and 4 yellow beads. What is the probability of drawing a yellow bead from the bag? (Lesson 5.5)

37. Find the sum of $\frac{1}{6}$, $\frac{1}{6}$, and $\frac{2}{3}$. (Lesson 6.1)

38. What is $1 \frac{1}{4} - \frac{5}{8}$? (Lesson 6.6)
39. A container and 6 lemons have a total weight of \( \frac{4}{5} \) pound. Two lemons have a total weight of \( \frac{1}{10} \) pound. Find the weight of the container if all the lemons have the same weight. (Lesson 6.8)
Extended Response

Solve. Show your work.

40. A clinic needs 1,350 chairs for a charity event. Three stores donate chairs. Store A donates 216 chairs, Store B donates 420 chairs, and Store C donates 376 chairs. Does the clinic have enough chairs? Decide if you need to find an estimate or an exact answer. (Lesson 2.1)

41. Barrie had some stamps. He gave \( \frac{1}{8} \) of them to Tom. If he gave 15 stamps to Tom, how many stamps did he have at first? (Lesson 6.8)
42. Mr. Marchez ordered 7 books through a website. The total mass of the books was 3,458 grams. The masses of each book were
360 g  410 g  280 g  150 g  550 g  ?  ?
The masses of the remaining 2 books were not given. (Lesson 5.6)

a. Find the mean mass of the books.

b. Find the mean mass of the 2 remaining books.

c. The range of the masses is 710 grams, and the lightest mass is given above. What is the mass of the heaviest book?
43. A factory packages 4,250 boxes of cereal. The number of oat cereal boxes is 715 more than the number of wheat cereal boxes. The number of fruit cereal boxes is 5 times the number of wheat cereal boxes. How many fruit cereal boxes does the factory package? (Lesson 3.5)

44. Three people guess the number of cherries in a bag, rounded to the nearest 10. Alex guesses 80 cherries, Jess guesses 60 cherries, and Nia guesses 70 cherries. The actual number is a multiple of 7. The sum of the digits of the number is 9. Who guessed correctly? (Lesson 2.1 and 2.2)
End-of-Year Review
Test Prep

Multiple Choice
Fill in the circle next to the correct answer.

1. The digit 9 in 89.4 stands for __________. (Lesson 7.2)
   \(\text{A} \quad 9 \text{ hundredths} \quad \text{B} \quad 9 \text{ tenths} \quad \text{C} \quad 9 \text{ ones} \quad \text{D} \quad 9 \text{ tens} \)

2. Find 9.50 – 2.63. (Lesson 8.2)
   \(\text{A} \quad 5.07 \quad \text{B} \quad 5.73 \quad \text{C} \quad 6.67 \quad \text{D} \quad 6.87 \)

3. The product of 9 and ________ is 1,107. (Lesson 3.1)
   \(\text{A} \quad 123 \quad \text{B} \quad 1,098 \quad \text{C} \quad 1,116 \quad \text{D} \quad 9,963 \)

4. The table shows the number of fruit and biscuits a group of students have. Some numbers in the table are missing. Use the information in the table to answer the question. (Lesson 4.1)

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of Fruit</th>
<th>Number of Biscuits</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annabel</td>
<td>25</td>
<td>34</td>
<td>59</td>
</tr>
<tr>
<td>Mandy</td>
<td>12</td>
<td>26</td>
<td>38</td>
</tr>
<tr>
<td>Crystal</td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

The total number of fruit and biscuits is 120. How many fruit does Crystal have?
   \(\text{A} \quad 6 \quad \text{B} \quad 23 \quad \text{C} \quad 37 \quad \text{D} \quad 97 \)
5. The stem-and-leaf plot shows the points scored by Jason in nine basketball games. (Lesson 5.3)

<table>
<thead>
<tr>
<th>Stem</th>
<th>Leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 2 9</td>
</tr>
<tr>
<td>2</td>
<td>3 6 6 7</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

What is the outlier of the set of data?

- A) 40
- B) 26
- C) 23
- D) 10

6. Peter draws one of these number cards from a bag. (Lesson 5.5)

4 1 12 7 23 10

What is the probability that he draws a number less than 10?

- A) \(\frac{1}{2}\)
- B) \(\frac{1}{3}\)
- C) \(\frac{1}{4}\)
- D) \(\frac{1}{6}\)

7. Subtract \(\frac{2}{4}\) from \(\frac{7}{12}\). Express your answer in simplest form. (Lesson 6.2)

- A) \(\frac{1}{12}\)
- B) \(\frac{2}{15}\)
- C) \(\frac{2}{5}\)
- D) \(\frac{11}{15}\)
8. \[ \frac{4}{5} = \frac{3}{5} \] (Lesson 6.3)
   - A. \( \frac{12}{5} \)
   - B. \( \frac{20}{5} \)
   - C. \( \frac{23}{5} \)
   - D. \( \frac{43}{5} \)

9. Which of the shaded parts represents \( \frac{4}{5} \) of a set? (Lesson 6.7)
   - A.
   - B.
   - C.
   - D.

10. The arrow is pointing at _______. (Lesson 7.1)
    - A. 0
    - B. 1.2
    - C. 1.3
    - D. 4
11. Ava's mass is 45.0 kilograms when rounded to 1 decimal place. What is her least possible mass? \((\text{Lesson 7.4})\)
   \[\begin{array}{ll}
   \text{A} & 45.01 \text{ kilograms} \\
   \text{B} & 44.95 \text{ kilograms} \\
   \text{C} & 44.99 \text{ kilograms} \\
   \text{D} & 44.55 \text{ kilograms}
   \end{array}\]

12. 0.55 is not equal to \[\frac{\text{_________}}{\text{_________}}\]. \((\text{Lesson 7.5})\)
   \[\begin{array}{ll}
   \text{A} & \frac{11}{20} \\
   \text{B} & \frac{55}{100} \\
   \text{C} & \frac{550}{1,000} \\
   \text{D} & \frac{55}{10}
   \end{array}\]

13. \(4.6 - 0.46\) is equal to \[\text{_________}\]. \((\text{Lesson 8.2})\)
   \[\begin{array}{ll}
   \text{A} & 0 \\
   \text{B} & 4.14 \\
   \text{C} & 4.20 \\
   \text{D} & 4.26
   \end{array}\]

14. Which of these angles is an acute angle? \((\text{Lesson 9.1})\)
   \[\begin{array}{ll}
   \text{A} & \\
   \text{B} & \\
   \text{C} & \\
   \text{D} & 
   \end{array}\]
15. Sam needs to draw an angle of 125° from point X. He must join point X to point ________. (Lesson 9.2)
   A  A     B  B
   C  C     D  D

16. Refer to the figure to answer Exercises 15 and 16.

Which line segment is perpendicular to $\overline{AH}$? (Lesson 10.1)
   A  HG     B  BE
   C  FE     D  AD

17. Which line segment is parallel to $\overline{CD}$? (Lesson 10.2)
   A  AD     B  GH
   C  BE     D  FG
18. In the square below, find the measure of \( \angle a \). (Lesson 11.2)

\[ \square \]

A) 30°  
B) 45°  
C) 60°  
D) 90°

19. The perimeter of a rectangle is 24 centimeters. The length of one of its sides is 5 centimeters. What is the area? (Lesson 12.1)

A) 7 cm²  
B) 14 cm²  
C) 35 cm²  
D) 49 cm²

20. All line segments on the figure meet at right angles. Find \( EF \). (Lesson 12.1)

\[ \text{Diagram with segments labeled A, B, C, D, E, F, and H, with measurements of 10 cm, 12 cm, 4 cm, and 8 cm.} \]

A) 4 cm  
B) 6 cm  
C) 8 cm  
D) 10 cm
21. Which pair of figures are symmetric? (Lesson 13.1)

- A and B
- C and D

22. What is the repeated shape used in the tessellation? (Lesson 14.1)

- A
- C

23. Which of these shapes has rotational symmetry? (Lesson 13.2)

- A
- B
- C
- D
24. This shape can be tessellated by __________. \text{(Lesson 14.2)}

A. sliding  B. rotation  C. flipping  D. All of the above

25. From position A to B, the unit shape has been __________.

A. slid  B. rotated  C. flipped  D. none of the above
Short Answer

Read each question carefully. Write your answers in the space given. Give your answers in the correct units.

26. I am a number between 30 and 50. I am a multiple of 8. My greatest common factor with 25 is 5. What number am I? (Lessons 2.2 and 2.3)

27. The table shows the number of marbles Anthony and Michelle have. Complete the table and answer the questions. (Lesson 4.1)

<table>
<thead>
<tr>
<th></th>
<th>Red Marbles</th>
<th>Blue Marbles</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony</td>
<td>18</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Michelle</td>
<td>37</td>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>

a. What was the total number of red marbles?

b. What fraction of the total number of marbles were blue?
28. The graph shows the amount of water used by the residents of an apartment block over a morning. (Lesson 4.3)

**Amount of Water used by the Residents**

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume of Water (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 A.M.</td>
<td>0</td>
</tr>
<tr>
<td>8 A.M.</td>
<td>1,000</td>
</tr>
<tr>
<td>9 A.M.</td>
<td>2,000</td>
</tr>
<tr>
<td>10 A.M.</td>
<td>3,000</td>
</tr>
<tr>
<td>11 A.M.</td>
<td>4,000</td>
</tr>
<tr>
<td>12 P.M.</td>
<td>5,000</td>
</tr>
<tr>
<td>1 P.M.</td>
<td>6,000</td>
</tr>
</tbody>
</table>

a. At which two times was the same amount of water used?

b. At what time was the amount of water used twice that used at noon?

29. A bag has 5 pink balls, 8 yellow balls, and 4 blue balls. What is the probability of drawing a pink ball from the bag? (Lesson 5.5)

30. What is \( \frac{7}{12} - \frac{2}{6} \)? Express your answer in simplest form. (Lesson 6.2)
31. Express $\frac{30}{7}$ as a mixed number. (Lesson 6.5)

32. Find the difference between $\frac{5}{8}$ and 3. (Lesson 6.6)

33. How many grey squares must be replaced by white squares so that $\frac{2}{3}$ of the total number of squares are grey? (Lesson 6.7)

34. What is the number in the box? (Lesson 7.2)
   $6.34 = 6 + 0.3 + \square$

35. Li Li is 1.85 meters tall. Round her height to the nearest tenth of a meter. (Lesson 7.4)

36. Express $\frac{6}{25}$ as a decimal. (Lesson 7.5)
37. Draw and label a line segment $BC$ such that the measure of angle $ABC$ is $167^\circ$. Line segment $AB$ is given. (*Lesson 9.2*)

![Diagram of line segment $AB$]

38. Draw a line segment perpendicular to $AB$ through point $O$. (*Lesson 10.1*)

![Diagram of line segment $AB$ and point $O$]

39. Draw a line parallel to $CD$ passing through point $X$. (*Lesson 10.2*)

![Diagram of line segment $CD$ and point $X$]

40. $AB$ is a vertical line segment and $BC$ is a horizontal line segment. Find the measure of $\angle ABC$. (*Lesson 10.3*)
41. Look at the figure below to answer the question. (Lesson 12.3)

\[ \begin{array}{c}
X \\
B \\
Y \\
D \\
Z \\
\end{array} \]

X, Y, and Z are squares. The length of each side of X is 5 centimeters and the length of each side of Y is 3 centimeters. \( AB = CD \).
Find the total length of the thick lines in the figure.

42. Shade some squares and half-squares to make a symmetric pattern in the figure. (Lesson 13.3)

43. In the tessellation below, the unit shape is \( \square \).
Extend the tessellation in the space provided by adding four more unit shapes. (Lesson 14.2)
44. Complete the tessellation by adding three more unit shapes. *(Lesson 14.2)*

45. Complete the figure so that it has rotational symmetry about point $O$. *(Lesson 13.3)*

46. a. Does the word $\text{N O}$ have rotational symmetry? *(Lesson 13.3)*

   b. Fill in the box with a letter so that $\text{N O}$ will have rotational symmetry. *(Lesson 13.3)*
Extended Response
Solve. Show your work.

47. Jane used $\frac{1}{4}$ of the flour to make biscuits.
    She used $\frac{1}{2}$ of the flour to bake a cake.
    What fraction of the flour was left?

48. Mr. Lim has some savings. If he gives $40 to one brother, he will have $6,145 left. But he decides to give all his savings to his 5 brothers equally. How much will each brother get?

49. Rita bought fabric and ribbon from a store. The ribbon cost $18.50. Rita paid the cashier $50.00 and received change of $5.25. How much did the fabric cost?
50. The area of a rectangle is 98 square centimeters, and its width is 7 centimeters. Find the length.

51. Richard planted some grass on a rectangular plot of land which measures 12 meters by 8 meters. He left a margin of 0.5 meters around the grass, as shown in the figure below. Find the area of land covered by grass. (Lesson 12.4)