Learn At Home Answer Key
for all grades

Grades 3-5

Day 1

WHALES IN THE CITY

1. September

2a. FIN WHALE CALLS FROM 8/18 TO 8/24

<table>
<thead>
<tr>
<th>Day</th>
<th>Number of Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/18</td>
<td>5</td>
</tr>
<tr>
<td>8/19</td>
<td>10</td>
</tr>
<tr>
<td>8/20</td>
<td>15</td>
</tr>
<tr>
<td>8/21</td>
<td>20</td>
</tr>
<tr>
<td>8/22</td>
<td>25</td>
</tr>
<tr>
<td>8/23</td>
<td>30</td>
</tr>
</tbody>
</table>

2b. August 18, August 22, August 23

3. WHALE CALLS HEARD OVER A PERIOD OF TIME

<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1/2</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

4a. humpback

4b. Answers will vary, though they might have been communicating with each other or responding to something in the area (such as a predator).

5. Answers will vary, but should include something about how the sound data cannot provide any identifying characteristics about the whales, like sex, age, or health. The sounds can't help you differentiate between individual whales. The data can tell you the species along with the time and relative location of the calls.

Day 2

MUDDY MOVES

1A. C, yardstick

1B. D, feet

2A. Scale

2B. Pounds or tons; It depends on the size of the trucks and how much dirt they can hold.

3A. B, volume

3B. Cups, pints, quarts, or gallons

4A. No, you would need to measure the length to find the distance.

4B. An odometer because it measures longer distances.

Day 3

DOMINO DESIGNER

5. 20

6. 200

7. 5,300

8. 1,508 → 1,500
   1,332 → 1,300
   1,428 → 1,400
   Greatest to least: 1,500; 1,400; 1,300

9A. 76,020

5B. 76,000. Answers will vary. Possible answers: The answer in 5B (76,000) is less than the answer in 5A (76,020). The number in 5A rounded up, while the number in 5B rounded down.
Day 4

BURGER BUGS?

1A. A and D

1B. Chicken has less fat because $\frac{1}{9} < \frac{1}{8}$.

2A. Grasshoppers

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>7/10</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grasshoppers</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Tilapia

<table>
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<th>0</th>
<th>3/10</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tilapia</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

2B. Grasshoppers

3. I would choose caterpillars because $\frac{7}{10} > \frac{1}{10}$.

4. Crickets (\(\frac{1}{3}\)), Palm Weevil Grubs (\(\frac{1}{7}\)), Beef (\(\frac{1}{10}\))

Day 5

EXTRAORDINARY EYES

5. 12 owl eyes

\[ \begin{array}{c}
\text{X X} \\
\text{X X} \\
\text{X X} \\
\text{X X} \\
\text{X X} \\
\end{array} \]

2A. 5 \times 4 = 20 eyes

2B. Answers will vary. Possible answers: 4 \times 5 = 20; 5 + 5 + 5 + 5 = 20; 4 + 4 + 4 + 4 + 4 = 20

3. Arrays can be arranged in the following configurations.

\[ \begin{array}{c}
\text{X X X X X X X X X X X X X X} \\
\text{X X X X X X X X X X X X X X} \\
\text{X X X X X X X X X X X X X X} \\
\text{X X X X X X X X X X X X X X} \\
\text{X X X X X X X X X X X X X X} \\
\end{array} \]

4. 2 \times 5 = 10 eyes

\[ \begin{array}{c}
\text{X X X X X X X} \\
\text{X X X X X X X} \\
\end{array} \]

Grades 6 and up

Day 1

COZY CAMOUFLAGE

1. \( \frac{12 \text{ stitches}}{2 \text{ in.}} = \frac{x}{9 \text{ in.}} \)
   \[ x = \frac{108 \text{ stitches}}{2} = 54 \text{ stitches wide} \]

2. \( \frac{15 \text{ stitches}}{3 \text{ in.}} = \frac{x}{8.5 \text{ in.}} \)
   \[ x = \frac{127.5 \text{ stitches}}{3} = 42.5 = 43 \text{ stitches} \]

3. \( \frac{50 \text{ stitches}}{4 \text{ in.}} = \frac{x}{42 \text{ in.}} \)
   \[ x = \frac{2,100 \text{ stitches}}{4} = 525 \text{ stitches} \]

4. \( \frac{3.5 \text{ rows}}{0.5 \text{ in.}} = \frac{x}{6 \text{ in.}} \)
   \[ x = \frac{21 \text{ rows}}{0.5} = 42 \text{ rows of stitches} \]

5. \( \frac{11 \text{ stitches}}{2 \text{ in.}} = \frac{x}{6 \text{ in.}} \)
   \[ x = \frac{66 \text{ stitches}}{3} = 33 \text{ stitches across} \]

\[ \begin{array}{c}
\text{X X X X X X X X X} \\
\text{X X X X X X X X X} \\
\text{X X X X X X X X X} \\
\text{X X X X X X X X X} \\
\text{X X X X X X X X X} \\
\end{array} \]

6. \( \frac{32 \text{ stitches}}{3 \text{ in.}} = \frac{x}{4 \text{ in.}} \)
   \[ x = \frac{160 \text{ stitches}}{3} = 52 \text{ stitches per inch} \]

7. Answers will vary. Please accept all reasonable pattern designs.

Day 2

ROBOT DOG VS. REAL DOG

Accept all reasonable answers based on the graph. Answers were found using the original data.

1. $3,835.99 - $3,800

2A. The service is free for 3 years because the line of the graph is flat, or has no slope from years 0 through 3.

2B. $3,835.99 - $2,899.99 = $940

\[ \frac{940}{3} = \frac{313.33}{3} = 313.33 \text{ per year} \]

3. See graph to the right.

4. The real dog will cost more after year 2.

5. Answers will vary. Possible answer: An Aibo is a better financial investment because it is less expensive over time.
Learn At Home Answer Key

Day 3

THE K-POP WAVE

1. Mean: \( \frac{7 + 9 + 5 + 7 + 7 + 13 + 18}{7} = \frac{66}{7} = 9.4 \approx 9 \) members
   Median: 5, 7, 7, 9, 13, 18
   Mode: 7
2. Mean: \( \frac{4 + 9 + 8 + 5 + 6 + 5 + 4}{7} = \frac{41}{7} = 5.9 \approx 6 \) members
   Median: 4, 4, 5, 5, 6, 8, 9
   Mode: 4 and 5
3. Mean: \( \frac{7 + 9 + 5 + 7 + 13 + 18 + 4 + 9 + 8 + 5 + 6 + 5 + 4}{14} = \frac{107}{14} = 7.6 \approx 8 \) members
   Median: \( \frac{7 + 7}{2} = 7 \)
   Mode: 5 and 7
4. Answers will vary. Possible answers: The female groups on average have fewer members than the male groups; The male groups are typically larger than the female groups.

Day 4

NOT SO FAR, FAR AWAY

1. See below for the labeled map.
2. Redwood forests, California; Endor
3. Hardangerjøkulen glacier, Norway; Hoth
4. Salar de Uyuni, Bolivia; Crait
5. See below for the labeled map.

Day 5

PREDICTING YOUR PLAYLIST

1. \( P(\text{Selena Gomez}) = \frac{3}{8} = 0.38 = 38\% \)
2A. \( P(\text{Shawn Mendes in Playlist 1}) = \frac{2}{8} = 0.25 = 25\% \)
2B. \( P(\text{Shawn Mendes in all playlists}) = \frac{3}{32} = 0.09 = 9\% \)
3A. \( P(\text{Beyoncé}) = \frac{2}{4} = 0.5 = 50\% \)
3B. \( P(\text{Beyoncé and John Legend}) = \frac{1}{4} = 0.25 = 25\% \)
4. \( P(\text{Maroon 5 song}) = \frac{5}{32} = 0.16 = 16\% \)
5. 8 songs total – 2 songs = 6 songs
   \( P(\text{BTS song}) = \frac{2}{6} = 0.33 = 33\% \)