1. Explain how to find $40 \times 50$ using mental math.

   

2. Mrs. Traynor's class is taking a field trip to the zoo. The trip will cost $26 for each student. There are 22 students in her class.

   **Part A**

   Round each factor to estimate the total cost of the students' field trip.

   

   **Part B**

   Use compatible numbers to estimate the total cost of the field trip.

   

   **Part C**

   Which do you think is the better estimate? Explain.
3. For numbers 3a–3e, select Yes or No to show if the answer is correct.

3a.  $35 \times 10 = 350$  ○ Yes  ○ No
3b.  $19 \times 20 = 380$  ○ Yes  ○ No
3c.  $12 \times 100 = 120$  ○ Yes  ○ No
3d.  $70 \times 100 = 7,000$  ○ Yes  ○ No
3e.  $28 \times 30 = 2,100$  ○ Yes  ○ No

4. There are 23 boxes of pencils in Mr. Shaw’s supply cabinet. Each box contains 100 pencils. How many pencils are in the supply cabinet?


pencils

5. Which would provide a reasonable estimate for each product? Write the estimate beside the product. An estimate may be used more than once.

<table>
<thead>
<tr>
<th>50 \times 20</th>
<th>25 \times 40</th>
<th>30 \times 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 \times 38</td>
<td>46 \times 18</td>
<td></td>
</tr>
<tr>
<td>31 \times 32</td>
<td>39 \times 21</td>
<td></td>
</tr>
</tbody>
</table>

6. There are 26 baseball teams in the league. Each team has 18 players. Write a number sentence that will provide a reasonable estimate for the number of players in the league. Explain how you found your estimate.


7. The model shows $48 \times 37$. Write the partial products.
8. Jess made this model to find the product $32 \times 17$. Her model is incorrect.

```
     10  7
 30  40  37
 2   12  9
```

$32 \times 17 = 98$

**Part A**

What did Jess do wrong?

**Part B**

Redraw the model so that it is correct.

**Part C**

What is the actual product $32 \times 17$?

9. Tatum wants to use partial products to find $15 \times 32$. Write the numbers in the boxes to show $15 \times 32$.

$$( \square \times \square ) + ( \square \times \square ) + ( \square \times \square ) + ( \square \times \square )$$
10. Which product is shown by the model? Write the letter of the product on the line below the model.

A  $17 \times 36$  B  $24 \times 14$  C  $13 \times 13$

<table>
<thead>
<tr>
<th>10</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>210</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>10</td>
<td>300</td>
</tr>
<tr>
<td>20</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
</tr>
</tbody>
</table>

-------------------------------


12. Write the unknown digits. Use each digit exactly once.

\[
\begin{array}{c}
46 \\
\times 93 \\
\hline
1 \\
2 \\
4 \\
6 \\
8 \\
\end{array}
\]

\[
\begin{array}{c}
3,000 \\
50 \\
20 \\
\hline
4,780 \\
\end{array}
\]

13. Mike has 16 baseball cards. Niko has 17 times as many baseball cards as Mike does. How many baseball cards does Niko have?

__________ baseball cards


\[36 \times 28 = ____________\]
Name ______________________________

15. A farmer planted 42 rows of tomatoes with 13 plants in each row. How many tomato plants did the farmer grow?

\[42 \times 13 = \text{__________} \text{ tomato plants}\]

16. Select another way to show \(25 \times 18\). Mark all that apply.

- \((20 \times 10) + (20 \times 8) + (5 \times 10) + (5 \times 8)\)
- \((25 \times 20) + (25 \times 5) + (25 \times 10) + (25 \times 8)\)
- \((20 \times 18) + (5 \times 10) + (5 \times 8)\)
- \((25 \times 10) + (25 \times 8)\)
- \((25 \times 20) + (25 \times 5)\)

17. Terrell runs 15 sprints. Each sprint is 65 meters. How many meters does Terrell run? Show your work.

\[
\text{Total meters} = 15 \times 65
\]

18. There are 3 new seats in each row in a school auditorium. There are 15 rows in the auditorium. Each new seat cost $74. What is the cost for the new seats? Explain how you found your answer.

\[
\text{Total cost} = 3 \times 15 \times 74
\]


\[
\text{Total books Ray packed} = 27 \times 25
\]
\[
\text{Total books Ella packed} = 23 \times 30
\]
\[
\text{More books Ella packed} = \text{Total books Ella packed} - \text{Total books Ray packed}
\]
20. Julius and Walt are finding the product of 25 and 16.

**Part A**

<table>
<thead>
<tr>
<th></th>
<th>Julius</th>
<th>Walt</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>×16</td>
<td>250</td>
<td>200</td>
</tr>
<tr>
<td>+150</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>500</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>+50</td>
<td>670</td>
<td></td>
</tr>
</tbody>
</table>

Julius' answer is incorrect. What did Julius do wrong?

**Part B**

What did Walt do wrong?

**Part C**

What is the correct product?


**Part A**

What is a reasonable estimate for the total cost of the clothing? Show or explain how you found your answer.

**Part B**

What is the exact answer for the total cost of the clothing? Show or explain how you found your answer.