Level F Placement Test

The Placement Test provides for three outcomes:

- The student lacks the necessary skills to place in CMC Level F.
- The student places at Lesson 1 of CMC Level F.
- The student places at Lesson 16 of CMC Level F.

The test has two sections: 1 and 2.

Students who have not gone through CMC Level E should take Section 1. Results of this section will determine whether each student has the necessary skills to place at Lesson 1. Students who have gone through CMC Level E should take Section 2. Results of this section will determine whether a student places at Lesson 1 or Lesson 16 of Level F.

If possible, present the Placement Test on the first day of instruction. Pass out a test to each student. Present the wording in the test Administration Directions script.

**Note:** What you say is shown in blue type. When observing students, make sure that they are working on the correct part of the test. Do not prompt them in a way that would let them know the answer to an item.

Reproducible copies of the test appear at the back of this guide.
d. Find part 3. ✔
   (Teacher reference:)

<table>
<thead>
<tr>
<th>a. _______</th>
<th>b. _______</th>
<th>c. _______</th>
<th>d. _______</th>
</tr>
</thead>
</table>

- I’m going to say numbers. You’ll write them on the lines in part 3.
- Touch line A. ✔
- Write 1 thousand 92 on line A. ✔
- Touch line B. ✔
- Write 18 thousand 400 on line B. ✔
- Write 9 thousand 2 on line C. ✔
- Write 14 thousand 60 on line D. ✔

e. Work the problems in parts 4 and 5 on your own. Pencils down when you’re finished. ✔
   (Teacher reference:)

<table>
<thead>
<tr>
<th>Part 4</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 4046</td>
<td>b. 8610</td>
<td>c. 2604</td>
</tr>
<tr>
<td>– 139</td>
<td>– 1420</td>
<td>– 793</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part 5</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 254</td>
<td>b. 350</td>
<td>c. 6423</td>
</tr>
<tr>
<td>× 7</td>
<td>× 9</td>
<td>× 5</td>
</tr>
</tbody>
</table>

(Collect and score Placement Test, Section 1.)

**CONNECTING MATH CONCEPTS—LEVEL F**

**PLACEMENT TEST, Section 2**

**Administration Directions**

a. (Hand out Placement Test, Section 2 to students. Direct students to put their names on the top of the test.)
- This is a test. Listen carefully and do your best work.

b. Touch part 1. ✔
   (Teacher reference:)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The fraction equals 4. The bottom number is 2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. The fraction is more than 1. The numbers are 5 and 6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. There are 12 parts in each unit. Two parts are shaded.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. The numbers are 3 and 8. The fraction is less than 1.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- You’ll write the fraction for each description. Read each description to yourself, and write the fraction.
- Pencils down when you’re finished. ✔
   (Observe but do not give feedback.)

c. Touch part 2. ✔
   (Teacher reference:)

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 7[357]</td>
<td>b. 5[315]</td>
<td>c. 2[804]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. 9[486]</td>
<td>e. 3[918]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Work all the division problems. Pencils down when you’re finished.
   (Observe but do not give feedback.)

**PASSING CRITERIA FOR EACH PART**

<table>
<thead>
<tr>
<th>Part</th>
<th>Pass</th>
<th>Not Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1</td>
<td>0 to 3 errors</td>
<td>4 or more errors (including problems not worked)</td>
</tr>
<tr>
<td>Part 2</td>
<td>0 to 3 errors</td>
<td>4 or more errors (including problems not worked)</td>
</tr>
<tr>
<td>Part 3</td>
<td>0 or 1 error</td>
<td>2 or more errors</td>
</tr>
<tr>
<td>Part 4</td>
<td>0 or 1 error</td>
<td>2 or more errors</td>
</tr>
<tr>
<td>Part 5</td>
<td>0 or 1 error</td>
<td>2 or more errors</td>
</tr>
</tbody>
</table>

**PLACEMENT CRITERIA**

<table>
<thead>
<tr>
<th>Students who fail 3 or more parts:</th>
<th>Administer the CMC Level E Placement Test.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students who pass 3 or more parts:</td>
<td>Begin CMC Level F at Lesson 1.</td>
</tr>
</tbody>
</table>
d. Touch part 3. ✔
   (Teacher reference:)
   
   \[
   \begin{align*}
   \text{a. } \frac{2}{7} \times \frac{3}{4} &= \_\_\_ \\
   \text{b. } \frac{1}{8} \times \frac{6}{1} &= \_\_\_ \\
   \end{align*}
   \]
   
   • The second fraction in each problem equals 1. You'll complete the fraction that equals 1 and then multiply. Below, you'll write a simple equation for the fractions that are equal. Work all the problems. Pencils down when you're finished.
   (Observe but do not give feedback.)

   e. Touch part 4. ✔
   (Teacher reference:)
   
   \[
   \begin{align*}
   \text{a. } \text{Mary is 25 years older than her daughter.} \\
   \text{b. } \text{Bill owns 110 fewer stamps than Jim.} \\
   \text{c. } \text{Jill earned$265 less than Fabio.} \\
   \text{d. } \text{The store is 12 feet taller than than house.} \\
   \end{align*}
   \]
   
   • For each sentence, you'll make a number family with two letters and a number. Read each sentence to yourself and make the families. Pencils down when you're finished.
   (Observe but do not give feedback.)

   f. Touch part 5. ✔
   (Teacher reference:)
   
   \[
   \begin{align*}
   \text{a. } \frac{3}{4} \div \frac{1}{8} &= \_\_\_ \\
   \text{b. } \frac{12}{5} + \frac{2}{2} &= \_\_\_ \\
   \text{c. } \frac{18}{4} + \frac{4}{4} &= \_\_\_ \\
   \text{d. } \frac{8}{8} \div \frac{7}{9} &= \_\_\_ \\
   \text{e. } \frac{20}{3} - \frac{10}{3} &= \_\_\_ \\
   \text{f. } \frac{9}{2} \times \frac{5}{2} &= \_\_\_ \\
   \end{align*}
   \]
   
   • If you can’t work a problem the way it is written, cross it out. Then work the rest of the problems. Pencils down when you’re finished.
   (Observe but do not give feedback.)

   g. (Collect and score Placement Test, Section 2.)
CMC Level F Placement Test, Section 1

Part 1
6 8 8 7 9 9 6 4 6 7
× 6 × 9 × 8 × 5 × 9 × 7 × 8 × 9 × 4 × 9

8 7 6 8 9 7 4 9 6 4
× 7 × 7 × 7 × 6 × 6 × 8 × 7 × 8 × 9 × 8

Part 2
7\sqrt{49} 5\sqrt{30} 8\sqrt{24} 7\sqrt{42} 6\sqrt{24} 6\sqrt{48} 9\sqrt{72} 6\sqrt{54} 7\sqrt{63} 6\sqrt{42}

7\sqrt{56} 8\sqrt{80} 9\sqrt{81} 9\sqrt{45} 9\sqrt{63} 8\sqrt{72} 6\sqrt{36} 3\sqrt{24} 8\sqrt{40} 3\sqrt{27}

Part 3
a. ________  b. ________  c. ________  d. ________

Part 4
a. 4046
   - 139
   ________

b. 8610
   - 1420
   ________

c. 2604
   - 793
   ________

Part 5
a. 254
   × 7

b. 350
   × 9

c. 6423
   × 5
Part 1 Write the fraction for each description.

- **a.** The fraction equals 4. The bottom number is 2.  
- **c.** There are 12 parts in each unit. Two parts are shaded.

- **b.** The fraction is more than 1. The numbers are 5 and 6.  
- **d.** The numbers are 3 and 8. The fraction is less than 1.

Part 2 Work each problem.

- **a.** $\frac{7}{3} \times \frac{5}{7} = \frac{35}{17}$  
- **b.** $\frac{5}{3} \times \frac{1}{5} = \frac{15}{3}$  
- **c.** $\frac{2}{8} \times \frac{4}{8} = \frac{16}{8}$

- **d.** $\frac{9}{4} \times \frac{1}{9} = \frac{9}{3}$  
- **e.** $\frac{3}{9} \times \frac{1}{3} = \frac{9}{3}$

Part 3 Complete the fraction that equals 1. Then multiply. Complete the simple equation below.

- **a.** $\frac{2}{7} \times \frac{4}{4} = \frac{8}{14}$  
- **b.** $\frac{1}{8} \times \frac{6}{6} = \frac{6}{12}$

- **c.** $\frac{8}{12} \times \frac{12}{12} = \frac{16}{24}$  
- **d.** $\frac{16}{24} \times \frac{24}{24} = \frac{384}{576}$
Part 4  Make a number family with two letters and a number.

a. Mary is 25 years older than her daughter.

b. Bill owns 110 fewer stamps than Jim.

c. Jill earned $265 less than Fabio.

d. The store is 12 feet taller than the house.

Part 5  Cross out the problems you cannot work the way they are written. Then work the rest of the problems.

a. \( \frac{3}{4} \times \frac{1}{8} = \)  

b. \( \frac{12}{5} + \frac{2}{2} = \)  

c. \( \frac{18}{4} + \frac{4}{4} = \)  

d. \( \frac{8}{8} + \frac{7}{9} = \)  

e. \( \frac{20}{3} - \frac{10}{3} = \)  

f. \( \frac{9}{2} \times \frac{5}{2} = \)
CMC Level F Placement Test Answer Key, Section 1

Part 1

\[
\begin{array}{cccccccc}
6 & 8 & 8 & 7 & 9 & 9 & 6 & 6 \\
\times 9 & \times 8 & \times 9 & \times 7 & \times 8 & \times 9 & \times 4 & \times 9 \\
\text{A} & \text{B} & \text{B} & \text{B} & \text{B} & \text{B} & \text{B} & \text{B} \\
\end{array}
\]

Part 2

\[
\begin{array}{cccccccc}
7 & 4 & 9 & 1 & 4 & 1 & 9 & 4 \\
\div 30 & \div 24 & \div 48 & \div 72 & \div 72 & \div 72 & \div 72 & \div 72 \\
\text{A} & \text{B} & \text{B} & \text{B} & \text{B} & \text{B} & \text{B} & \text{B} \\
\end{array}
\]

Part 3

\[
\begin{array}{cccc}
a. 1092 \\
b. 18400 \\
c. 9002 \\
d. 14060 \\
\end{array}
\]

Part 4

\[
\begin{array}{cccc}
a. \frac{40}{40} \div 2 \\
b. \frac{30}{20} - 1420 \\
c. \frac{2804}{1914} \\
\end{array}
\]

Part 5

\[
\begin{array}{cccc}
a. \frac{54}{1770} \\
b. \frac{350}{1150} \\
c. \frac{6423}{321112} \\
\end{array}
\]

CMC Level F Placement Test Answer Key, Section 2

Part 1

Write the fraction for each description.

a. The fraction equals 4. The bottom number is 2.
   \[
   \frac{8}{2}
   \]

b. The fraction is more than 1. The numbers are 5 and 6.
   \[
   \frac{5}{6}
   \]

c. There are 12 parts in each unit. Two parts are shaded.
   \[
   \frac{2}{12}
   \]

d. The numbers are 3 and 8. The fraction is less than 1.
   \[
   \frac{3}{8}
   \]

Part 2

Work each problem.

\[
\begin{array}{c}
a. \frac{51}{1597} \\
b. \frac{45}{1155} \\
c. \frac{402}{1804} \\
d. \frac{54}{4780} \\
e. \frac{106}{318} \\
\end{array}
\]

Part 3

Complete the fraction that equals 1. Then multiply. Complete the simple equation below.

\[
\begin{array}{c}
a. \frac{2}{7} \times \frac{6}{28} \\
b. \frac{6}{8} \times \frac{2}{4} \\
\end{array}
\]

Teacher’s Guide 157