Name:

Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: 80

How did you determine your answer?

Joe:

\[
\frac{78 + 76 + 74}{3} = \frac{228}{3} = 76
\]

Mary:

\[
\frac{73 + 83 + 75}{3} = \frac{231}{3} = 77
\]

Joe:

\[
\frac{78 + 80 + 80}{3} = \frac{239}{3} = 79
\]
Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: 78

How did you determine your answer?

\[
\frac{228}{3} = 76 \\
\frac{231}{3} = 77 \\
74 + y = 78
\]
Name: J

Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: 83

How did you determine your answer?

\[
\begin{array}{c}
178 \\
76 \\
\hline
+74 \\
228 \\
\hline
3 \frac{2}{18} \\
231 \\
\hline
3 \frac{7}{10} \\
0
\end{array}
\]

\[
\begin{array}{c}
173 \\
83 \\
\hline
+75 \\
231 \\
\hline
3 \frac{7}{31} \\
0
\end{array}
\]

\[
634
\]
Name:

Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: About 75

How did you determine your answer?

\[
\begin{align*}
\text{Joe:} & \quad 78, 76, 74 \quad \text{Mary:} & \quad 73, 83, 75 \\
\text{Mean Joe:} & \quad \frac{78 + 76 + 74}{3} = \frac{228}{3} = 76 \\
\text{Mean Mary:} & \quad \frac{73 + 83 + 75}{3} = \frac{231}{3} = 77
\end{align*}
\]
Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: 80

How did you determine your answer?

\[
\begin{array}{ccc}
78 & 76 & 74 \\
\hline
83 & 75 & 281 \\
\hline
226 & 83 \\
\end{array}
\]
Grade 9 - Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary's mean?

Answer: 80

How did you determine your answer?

\[
\begin{array}{c}
\text{Joe} \\
78 \\
76 \\
74 \\
\hline \\
234 \\
\text{Mary} \\
73 \\
73 \\
75 \\
\hline \\
231 \\
\text{Mean} \\
77 \\
76 \\
228 \\
\hline \\
228 \\
\text{Mean} \\
76 \\
78 \\
76 \\
\hline \\
234 \\
\text{Joe would have needed to score a 80 on his third test to have a higher mean than Mary.}
\end{array}
\]
Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: 76

How did you determine your answer?

[Box for written response]
Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: 78.

How did you determine your answer?

Joe: \[ \frac{78 + 76 + 74}{3} = \]

Mary: \[ \frac{73 + 83 + 75}{3} = \]

3 apart: \[ 74 + 3 = 77 \]

78
Name:

Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary’s mean?

Answer: __80%__ $\Box$ 

How did you determine your answer?

Joe: $78 + 76 + x = 228 \quad \frac{228}{18} = 13\%$

Mary: $73 + 83 + 75 = 231 \quad \frac{231}{21} = 11\%$

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Grade 9 – Benchmark 2
Constructed Response

Solve the problem below. Show your work in the box.

Joe had three test scores of 78, 76, and 74, while Mary had scores of 73, 83, and 75.

What is the minimum score Joe would have needed on his third test to have a higher mean than Mary's mean?

Answer: ___________________

How did you determine your answer?

\[
\frac{78 + 76 + 74}{3} = \frac{228}{3} = 76\%
\]

\[
\frac{73 + 83 + 75}{3} = \frac{231}{3} = 77\%
\]

5 + 5 suppose to be 78

\[
\frac{78 + 76 + 78}{3} = \frac{232}{3} = 77\%
\]