

Sample Exam MAE 3811 Prerequisite Examination

Part I. Passing Score: 12/14

For problems 1-6 perform the indicated operation.

1. $72.08 + 5.324$ 1. _____
2. $12.5 - 5.23$ 2. _____
3. $62.744 - 9.99$ 3. _____
4. 20.45×1.02 4. _____
5. $5 \overline{)1.8}$ 5. _____
6. $5.5 \div 3.3$ 6. _____

For problems 7-9 write with a single exponent.

7. Compute $\frac{10^7}{10^4}$ 7. _____
8. $\frac{5^7}{5^{-3}}$ 8. _____
9. $4^5 \times 4^{-2}$ 9. _____
10. Round 8.3978 to the nearest hundredth. 10. _____
11. Round 76,549 to the nearest thousand. 11. _____
12. The 7 in 476,944,358 gives the # of 12. _____
13. The 5 in 92.1254 gives the # of 13. _____
14. Write $<$, $>$ or $=$ to make the statement true
 2.3067 _____ 2.30672 . 14. _____

Part II

Passing Score: 8/10

For problems 1 and 2 order the fractions from smallest to largest:

1. $\frac{4}{9}, \frac{5}{8}, \frac{3}{7}$.

1. _____

2. $-\frac{1}{3}, \frac{1}{5}, -\frac{5}{2}$.

2. _____

For problems 3-10, perform the indicated operation. Write your answer in reduced form.

3. $\frac{11}{4} + \frac{5}{6}$

3. _____

4. $2\frac{2}{3} + 3\frac{3}{4}$

4. _____

5. $5\frac{2}{3} + 1\frac{1}{6}$

5. _____

6. $\frac{17}{3} - \frac{17}{7}$

6. _____

7. $\frac{14}{20} \times \frac{17}{7}$

7. _____

8. $2\frac{1}{4} \times 7\frac{2}{7}$

8. _____

9. $\frac{1}{3} \div 2$

9. _____

10. $1\frac{1}{5} \div 2\frac{1}{2}$

10. _____

Part III. Passing Score: 14/17.

For problems 1 and 2, compute using correct order of operations:

1. $5 - 18 \div 3 + 7 \times (2 + 1)$. 1. _____

2. $12 - 3^2 + 2 \times 5$ 2. _____

3. A car travels 180 miles in 4 hours.
What is its average speed? 3. _____

Perform the indicated operation.

4. $567 + 485 + 394 =$ 4. _____

5. 384×795 5. _____

6. $47 \overline{)38023}$ 6. _____

7. $763 + 4497$ 7. _____

8. $90786 - 1998$ 8. _____

9. $7 \overline{)924}$ 9. _____

10. $-54 + 25$ 10. _____

11. $-8 + (-17)$ 11. _____

12. $10 + (-25)$ 12. _____

13. $-2 - (-3)^3$ 13. _____

14. $-2^3 - 3$ 14. _____

15. $(-1)^{45}$ 15. _____

16. $-3 \times 4 \times (-2) \times (-6)$ 16. _____

17. 8001-699 17. _____