1. Perform the operation 5 - 7 using arithmetic for a 12-hour clock.

Select the correct answer.

○   5 - 7 = 10

○   5 - 7 = 12

○   5 - 7 = 11

2. Perform the operation 5 × 2 - 11 using arithmetic for a 12-hour clock.

Select the correct answer.

○   5 × 2 - 11 = 11

○   5 × 2 - 11 = 10

○   5 × 2 - 11 = 13

3. Is the statement $5{,}670 \equiv 270, \ (\mathrm{mod}\ 365)$ true?

Select the correct answer.

○   False

○   True

4. Is the statement $5{,}670 \equiv 270, \ (\mathrm{mod}\ 365)$ true?

Select the correct answer.

○   True

○   False

5. Perform the operation $1 \div 2, \ (\text{mod } 5)$.

Select the correct answer.

○ $1 \div 2 = 2$

○ $1 \div 2 = 11$

○ $1 \div 2 = 3$

6. Perform the operation $1 \div 2, \ (\text{mod } 5)$.

Select the correct answer.

○ $1 \div 2 = 2$

○ $1 \div 2 = 3$

○ $1 \div 2 = 9$

7. Solve the equation for x.

$$3x \equiv 2, \ (\text{mod } 7)$$

Select the correct answer.

○ $x = 4$

○ $x = 1$

○ $x = 3$

8. Assume that today is Friday (day 6). Determine the day of the week it will be at the end of the period at 390 days. (Assume no leap years.)

Select the correct answer.

○ Monday

○ Wednesday

○ Sunday

9. Is the set {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10} a group for multiplication modulo 11?

Select the correct answer.

○ No

○ Yes

10. Number the letters of the alphabet from 1 to 26; code a comma as 27, period as 28, and space as 29. Encode the message

THE EAGLE HAS LANDED.

Select the correct answer.

○ 14-5-22-5-18-29-19-1-25-29-14-5-22-5-18-28

○ 20-8-5-29-5-1-7-12-5-29-8-1-19-29-12-1-14-4-5-4-28

○ 9-14-29-7-15-4-29-23-5-29-20-10-21-19-20-28

○ 9-29-1-13-29-3-19-1-26-25-29

11. Number the letters of the alphabet from 1 to 26 and code a blank as 29. Decode the message.

9-29-12-15-22-5-29-13-1-20-8-5-13-1-20-9-3-19

Select the correct answer.

◯ FAILURE TEACHES SUCCESS

◯ I LOVE MATHEMATICS

◯ SQUARE MEALS MAKE ROUND PEOPLE

◯ WE ARE THE CHAMPIONS

12. Give the decoding key for the encoding key

Multiply by 9 and subtract 3, then divide the result by 5.

Select the correct answer.

◯ Divide by 9, then subtract 3, then divide by 5

◯ Add 3, multiply by 5

◯ Multiply by 5, add 3, then divide by 9

◯ Subtract 9, divide by 5

13. Number the letters of the alphabet from 1 to 26; code a comma as 27, period as 28, and space as 29. Encode the message.

Select the correct answer.

Encoding key: Multiply by 2 and add 5.

I LOVE MATHEMATICS.

○ ZFREIOPEZFRLE WQOC

○ WDESFMEVOPLRNPC

○ DOTOLENGZEDOTOLC

○ WE FTOEBGPUOBGPWKNC

14. Number the letters of the alphabet from 1 to 26; code a comma as 27, period as 28, and space as 29. Decode the message.

Encoding key: Multiply by 3.

QPE FOB QPEY G,POZ

Select the correct answer.

○ HUMPTY DUMPTY IS A FALL GUY.

○ YOU BET YOUR LIFE.

○ IN GOD WE TRUST.

○ I LOVE MATHEMATICS.

15. Number the letters of the alphabet from 1 to 26; code a comma as 27, period as 28, and space as 29. Decode the message.

Encoding key: Multiply by 2 and subtract 7.

KVXSVDK CAT

Select the correct answer.

- ◯ ANN LOVES CATS.
- ◯ I AM TIRED.
- ◯ PETER IS A SCHOOLBOY.
- ◯ MIDAS HAD A GILT COMPLEX.

ANSWER KEY

MASC 1024 Test 4, Practice Test

1. 5 - 7 = 10
2. 5 × 2 - 11 = 11
3. False
4. False
5. 1 ÷ 2 = 3
6. 1 ÷ 2 = 3
7. $x = 3$
8. Wednesday
9. Yes
10. 20-8-5-29-5-1-7-12-5-29-8-1-19-29-12-1-14-4-5-4-28
11. I LOVE MATHEMATICS
12. Multiply by 5, add 3, then divide by 9
13. WE FTOEBGPUOBGPWKNC
14. YOU BET YOUR LIFE.
15. I AM TIRED.