

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. Marcus does sit-ups every night for his exercise program. Each week, he increases the number of sit-ups he does every night, as shown in the table below.

**Sit-Ups Done Each Week**

Week	Sit-Ups Every Night
1	15
2	30
3	45
4	?

Based on the pattern shown in the table, what is the total number of sit-ups that Marcus will do every night during week 4?

- A. 50
- B. 55
- C. 60
- D. 65

*This online assessment item contains material that has been released to the public by the Massachusetts Department of Education.*

2. What is the total number of factors of 12?

- A. 4
- B. 6
- C. 8
- D. 12

*This online assessment item contains material that has been released to the public by the Massachusetts Department of Education.*

3. Which number is a factor of 15?

- A. 3
- B. 6
- C. 12
- D. 30

5 GCA M5N1 (5GCAM5N1)

4. If a number is divisible by the prime numbers 2 and 3, it must be divisible by 6. If a number is divisible by the prime numbers 2 and 5, it must be divisible by 10. Therefore, if a number is divisible by the prime numbers 3 and 7, it must be divisible by which of the following?

- A. 4
  - B. 8
  - C. 10
  - D. 21
- 

5. Route 16 is 100 miles long with a gas station every 7 miles and a snack store every 5 miles. If you start at the beginning of Route 16, where there is a snack store and a gas station, at which mile can you stop for both gas and snacks?

- A. mile 35
  - B. mile 12
  - C. mile 7
  - D. mile 5
- 

6. Which group of numbers contains only multiples of 3?

- A. 3, 9, 30, 31
  - B. 3, 13, 73, 123
  - C. 6, 12, 60, 120
  - D. 6, 13, 29, 39
- 

7. What even 2-digit number between 40 and 50 is a multiple of 7?

- A. 42
  - B. 47
  - C. 48
  - D. 49
- 

8.

Which of these numbers are prime numbers?

**1, 3, 9, 13, 15, 21, 25**

- A. 1, 9 and 15
  - B. 3 and 13
  - C. 3
  - D. 1
- 

9.

Which of these numbers are composite?

**2, 5, 8, 9, 10, 11, 13**

- A. 2
  - B. 8
  - C. 2, 8 and 10
  - D. 8, 9 and 10
-

10.

What is the greatest common factor of 24 and 32?

- A. 2
  - B. 4
  - C. 6
  - D. 8
- 

11.

What divisibility rule applies to 513?

- A. If a number is even, then it can be divided by 2.
  - B. If the sum of the digits of the number is divisible by 9, then the number can be divided by 9.
  - C. If the sum of the digits of the number is divisible by 4, then it can be divided by 4.
  - D. If the number is 3 digits, then it will have a 3 digit quotient.
- 

12.  $A = \{2, 3, 5, 7, 11, 19, 23, 29\}$

**Which of the following is a true statement concerning  $A$ ?**

- A. All numbers in  $A$  are odd.
- B. All numbers in  $A$  are prime.
- C. All numbers in  $A$  are even.
- D. All numbers in  $A$  are composites.

*Permission has been granted for reproduction by the Virginia Department of Education  
© Virginia Department of Education*

---

13. **Which group contains *only* prime numbers?**

- A. 5, 13, 29, and 47
- B. 7, 11, 27, and 43
- C. 7, 19, 33, and 41
- D. 11, 17, 37, and 39

*Permission has been granted for reproduction by the Virginia Department of Education  
© Virginia Department of Education*

**Answer Key**

1. C) 60

2. B) 6

3. A) 3

4. D) 21

5. A) mile 35

6. C) 6, 12, 60, 120

7. A) 42

8. B) 3 and 13

9. D) 8,9 and 10

10. D) 8

11. B) If the sum of the digits of the number is divisible by 9, then the number can be divided by 9.

12. B) All numbers in  $A$  are prime.

13. A) 5, 13, 29, and 47