Mathematical Literacy Placement Assessment (MLPA)
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The items on this assessment will help your instructors and your college determine which math course best fits your current understanding. Some items will indicate whether you are ready for a Mathematical Literacy course, while others will indicate whether you are ready for courses which follow Mathematical Literacy. Your college will use the results, along with other information, to make the best plan for you in mathematics.

Directions:
Select the best answer. There is no penalty for guessing.

1. $8+8+8$ is the same as:

   (A) $3 \cdot 8$ (B) 512 (C) $3+3+3$ (D) $\dfrac{3}{8}$

2. $1+\dfrac{1}{2}=$

   (A) $\dfrac{2}{3}$ (B) $\dfrac{11}{2}$ (C) $\dfrac{3}{2}$ (D) $\dfrac{1}{3}$

3. If I buy 3 pounds of nuts which have a price of $5.95 per pound, how do I find the total cost of the nuts?

   (A) $3+5.95$ (B) $5.95 \div 3$ (C) $5.95-3$ (D) $3 \cdot 5.95$

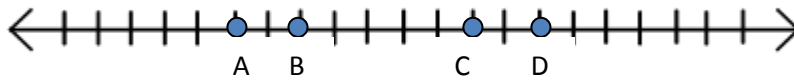4. If we have 3 gallons of orange juice and 2 gallons of apple juice, how many gallons of juice do we have?

   (A) 1.5 gallons   (B) 6 gallons   (C) 9 gallons   (D) 5 gallons

5. Which of these numbers is the **smallest**?   2.5   1.95 $\dfrac{8}{3}$ 4

   (A) 2.5 (B) 1.95 (C) $\dfrac{8}{3}$ (D) 4

6. Which of these numbers is the **largest**?   0.08   0.035   2%   5%

(A) 0.08   (B) 0.035   (C) 2%   (D) 5%

7. This picture shows these numbers on a number line: 3   5 -2 -4

A   B   C   D

Which of these points represents -2?

(A) A   (B) B   (C) C   (D) D

8. The seats in a classroom are arranged in 6 rows; each row has 5 seats.
   How many seats are in the classroom?

(A) 30   (B) 11   (C) 36   (D) 25

9. I bought 4 melons; their total weight was 14.5 pounds. Which of these is the closest to
   the average weight for each melon?

(A) 0.3 pounds   (B) 60 pounds   (C) 2 pounds   (D) 4 pounds

10. I started the week with $100. On Monday, I paid $15 for a book; on Tuesday, I paid $12
   for dinner. On Wednesday morning, a friend paid me $10 that she owed me.
   How much money do I have on Wednesday afternoon? Select the closest value.

(A) about $140   (B) about $60   (C) about $80   (D) about $40

11. A friend is buying a new video player, which has a price of $100. She will have to pay
   a 6% sales tax. How much will the video player cost my friend?

(A) $106   (B) $94   (C) $6   (D) $100.06

12. Altitudes above sea level are shown by positive numbers; those below sea level are shown by negative numbers. A submarine starts out at 20 feet below sea level, and descends 10 feet. Which of these operations will show the current altitude of the submarine?

      (A) $+20+(-10)$ (B) $+20-(+10)$ (C) $-20+(+10)$ (D) $-20+(-10)$

13. A car gets 25 miles per gallon of gasoline. How much gasoline is needed for 60 miles?

      (A) 2.4 gallons   (B) 0.42 gallons   (C) 35 gallons   (D) 15 gallons

14. A recipe says that we need 3 cups of flour when 2 eggs are used. How much flour is needed when 5 eggs are used?

      (A) 6 cups   (B) 7.5 cups   (C) 9 cups   (D) 10 cups

15. $4(x+3)$ is the same as

      (A) $12x$ (B) $x+12$ (C) $4x+7$ (D) $4x+12$

16. $9n-3n-2$ is the same as

      (A) $4n$ (B) $6n-2$ (C) 4 (D) $12n+2$

17. $y \cdot y \cdot y$ is the same as

      (A) $y+3$ (B) $3y$ (C) $\dfrac{y}{3}$ (D) y^3

18. To solve $4n=20$ to find the value of **n**, what step do we use?

      (A) $\dfrac{4n}{4}=\dfrac{20}{4}$ (B) $4n-4=20-4$ (C) $n=20\cdot4$ (D) $n=\dfrac{4}{20}$

19. Solve: $3x - 6 = -18$. The value of x is:

      (A) -8   (B) -4   (C) 0   (D) -15

20. $\left(2y^2\right)^3$ is the same as

      (A) $6y^6$ (B) $64y^8$ (C) $8y^8$ (D) $8y^6$

21. $6n^3\left(2n^4\right)$ is the same as

      (A) $12n^7$ (B) $12n^3 + 6n^4$ (C) $8n^{12}$ (D) $12n^{12}$

22. $\left(x+4\right)^2$ is the same as

      (A) $16x^2$ (B) $x^2 + 8x + 16$ (C) $9x + 16$ (D) $x^2 + 16$

23. A plane is currently 2000 feet above the ground, and the height is increasing 400 feet each minute. Using y for the height, and x for the time in minutes, what is the equation that will show the height based on the time?

      (A) $400y = 2000x$ (B) $y = 2000x + 400$

      (C) $y = \left(2000 - 400\right)x$ (D) $y = 400x + 2000$

24. Which of these ordered pairs is a solution to the equation $4x + 2y = 24$?

      (A) $\left(6, 12\right)$ (B) $\left(0, -\dfrac{1}{2}\right)$ (C) $\left(3, 6\right)$ (D) $\left(8, 2\right)$

25. These values come from a particular equation for a function relating x to each y value:
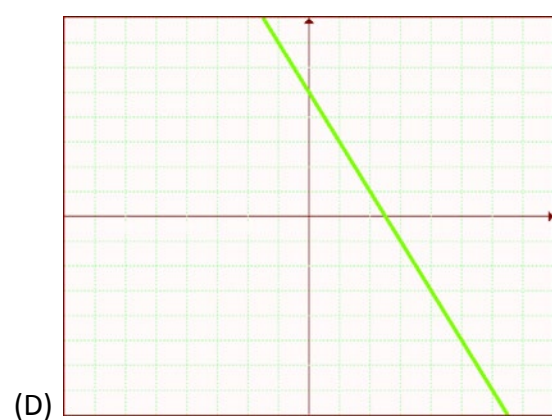
x	0	1	2
y	12	10	8

What is the y value when x is 3?

(A) 6   (B) 2   (C) -2   (D) 12

26. These values come from a particular equation for a function relating x to each y value:

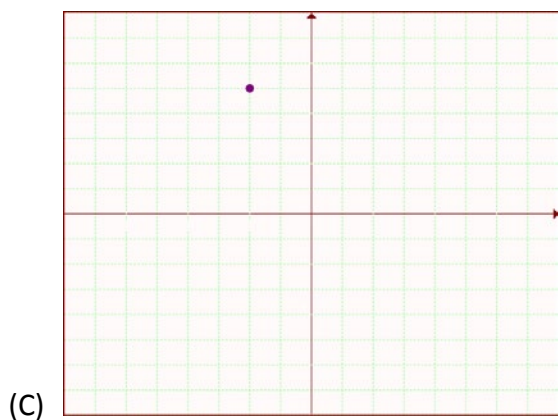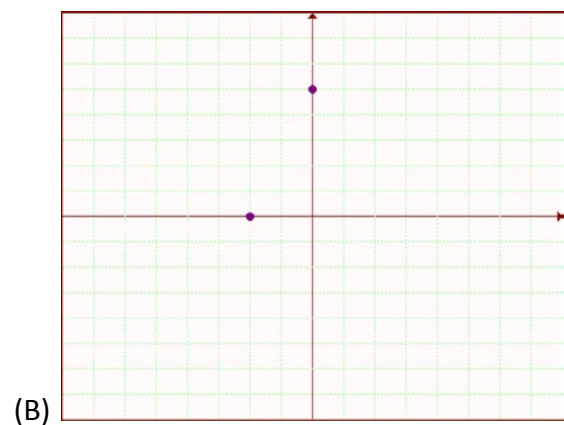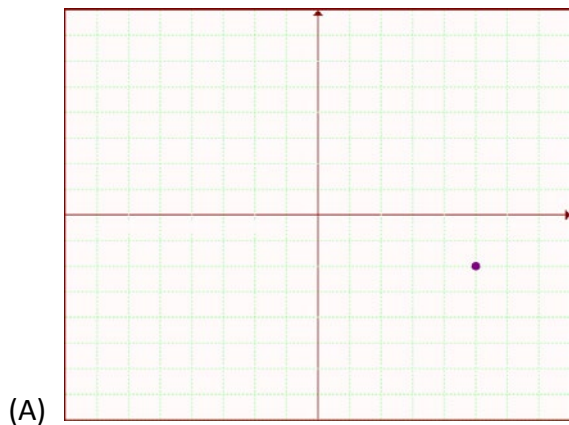| x	0	1	2
y	4	12	36

What is the y value when x is 3?

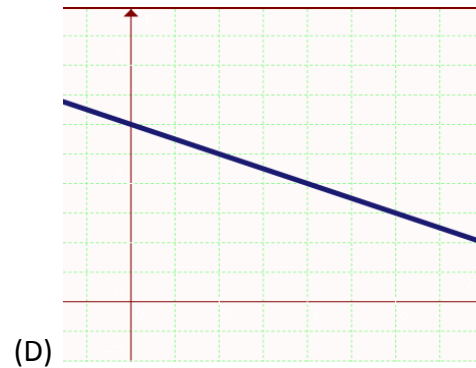(A) 8   (B) 60   (C) 108   (D) 44
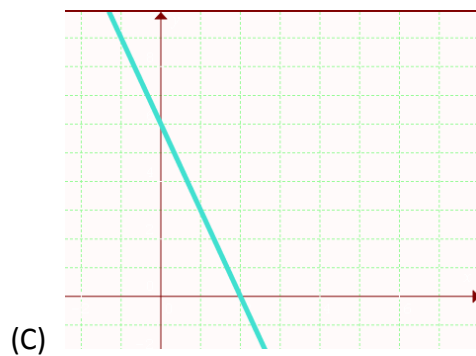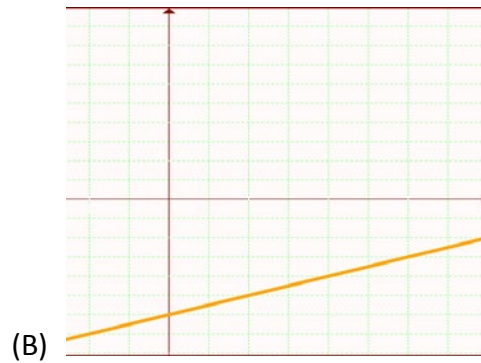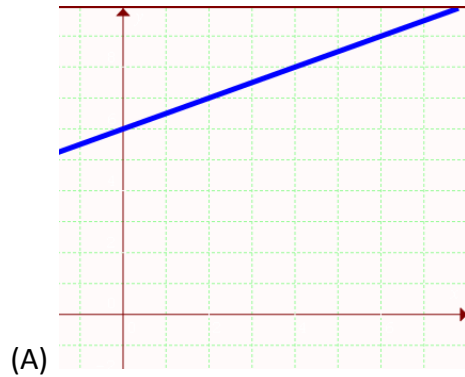
27. If $K = 4rt$, then $t =$

(A) $K - 4r$ (B) $\dfrac{K}{4r}$ (C) $\dfrac{k-4}{r}$ (D) $K - 4 - r$

28. Which of these is the correct graph of $(-2,5)$?

(A)

(B)

(C)

(D)

29. The water in a tank is currently at a height of 6 feet, and the height is decreasing 0.5 feet per hour. Using x as the time in hours and y as the height of the water in feet, which graph is accurate?

(A)

(B)

(C)

(D)

NOTE: Continued on the next page

30. A group of bacteria is growing fast; the group had 4 members at the start, and every minute the group grows ... the number of bacteria after minute 1 is 1.5 times the number at minute 0.   After minute 2, the number of bacteria is 1.5 times the number at minute 1. Each minute, the number of bacteria grows by the 1.5 factor.

Using x as the number of minutes, and y as the number of bacteria, which of these graphs is accurate?

(A)

(B)

(C)

(D)