

"NOTA" stands for None of these Answers

1. What is $\left| \frac{-318\pi}{4} \right|$?

a. $\frac{-159\pi}{2}$ b. $\frac{2\pi}{159}$ c. $\frac{159\pi}{2}$ d. 318π

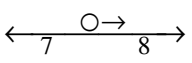
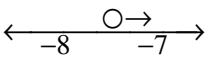
e. NOTA

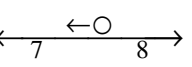
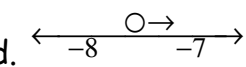
2. Solve for x: $5x - 13 < 3x + 2$

a. $x < \frac{-15}{2}$ b. $x < \frac{15}{2}$ c. $x > \frac{-15}{2}$ d. $x > \frac{15}{2}$

e. NOTA

3. The closest graph of the solution to #2.

a.  b. 

c.  d.  e. NOTA

4. If $a \# b = \frac{3a - 5b}{b + 2a}$, find the value of $2 \# 7$.

a. $\frac{-29}{11}$ b. $\frac{-29}{16}$ c. $\frac{1}{7}$ d. $\frac{11}{16}$ e. NOTA

5. Which of the following is: "The quotient of seven and thirteen, times the product of two and eight, plus the difference of one and zero, all divided by three."

a. $\frac{\frac{7}{13} \cdot (2 \cdot 8) + (1 - 0)}{3}$ b. $\frac{\frac{7}{13} \cdot 2 \cdot (8 + 1 - 0)}{3}$

c. $\frac{\frac{13}{7} \cdot 2 \cdot 8 + \frac{(1 - 0)}{3}}{3}$ d. $\frac{\frac{13}{7} \cdot 2 \cdot 8 + (0 - 1)}{3}$

e. NOTA

6. Factor completely: $3x^2 + 6x - 72$

a. $3(x + 2)(x - 4)$ b. $3(x - 2)(x + 4)$

c. $3(x + 4)(x - 6)$ d. $3(x - 4)(x + 6)$ e. NOTA

7. A right triangle has a leg with the length 4, and a hypotenuse of length 7. What is the length of the other leg?

a. 1.75 b. $\sqrt{33}$

c. $\sqrt{65}$ d. 11

e. NOTA

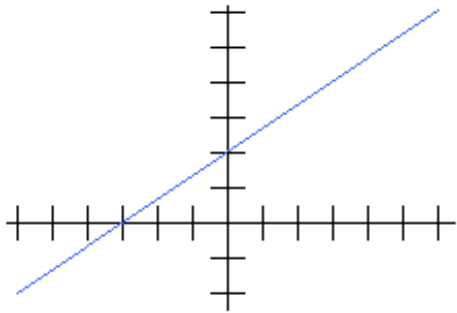
8. What two properties are shown in the equation $(ax + by)c = c(by + ax)$?
- Associative - addition and multiplication
 - Associative - addition and commutative- multiplication
 - Associative- multiplication and commutative- addition
 - Commutative - addition and multiplication
 - NOTA
9. Solve: $4x + y = 7$
 $3x + 2y = 0$
- $\left(\frac{14}{5}, \frac{21}{5}\right)$
 - $\left(\frac{-14}{5}, \frac{21}{5}\right)$
 - $\left(\frac{-14}{5}, \frac{-21}{5}\right)$
 - $\left(\frac{14}{5}, \frac{-21}{5}\right)$
 - NOTA
10. Of the following, what is the smallest subset of numbers the number "2743" could fit into?
- Integer
 - Irrational
 - Natural
 - Real
 - NOTA

11. If $xy = 21$, $yz = 42$, and $xz = 35$, find xyz if x , y , and z are all greater than zero.
- 25.2
 - 70
 - 98
 - $21\sqrt{70}$
 - NOTA
12. Evaluate $-a^2 + bc / (-d)$ if $a=4$, $b=1$, $c=7$, and $d=2$.
- 19.5
 - 11.5
 - 1.5
 - 4.5
 - NOTA
13. Solve for x : $4^{(x+5)} - 2^{(4x+7)} = 0$
- $\frac{-9}{7}$
 - $\frac{-2}{3}$
 - $\frac{7}{9}$
 - $\frac{3}{2}$
 - NOTA
14. Point C is located in the middle of Points A and B . Point A is located at $(2, 7)$, Point B is located at $(8, 3)$. What are the coordinates of Point C ?
- $(5, 5)$
 - $(-3, -2)$
 - $(-3, 2)$
 - $(3, -2)$
 - NOTA
15. What is the distance from points $A(26, 1)$ to $B(17, 4)$?
- $2\sqrt{3}$
 - $3\sqrt{2}$
 - $4\sqrt{3}$
 - $3\sqrt{10}$
 - NOTA

16. Chelsea is twice as old as Pedro. Four years ago, Chelsea's age was three times Pedro's age. How old will Pedro be in seven years?

- a. 8 b. 12 c. 15 d. 16 e. NOTA

Use the following graph to answer question #17. (Each tick mark represents one unit)



What is the equation of the graphed line?

- a. $2x + 3y = -6$ b. $2x - 3y = -6$ c. $3x + 2y = 6$
d. $3x - 2y = -6$ e. NOTA

18. Simplify: $(-6x^2y^3z^7)^4$

- a. $1296x^2yz^3$ b. $1296x^6y^7z^{11}$
c. $1296x^8y^{12}z^{28}$ d. $1296x^{16}y^{81}z^{2401}$
e. NOTA

19. List all prime factors for 70.

- a. 1, 2, 5, 7 b. 1, 2, 5, 7, 35
c. 2, 5, 7 d. 2, 5, 7, 35 e. NOTA

20. Factor $3x^2 - 5x + 2$ in the form

$(Ax + B)(Cx + D)$ and give the value of the product of A, B, C, and D.

- a. -6 b. 1 c. 6 d. 9 e. NOTA

21. Solve for x: $|7x + 21| + 4 = 3|x + 2|$

- a. $\frac{-23}{4}$ b. $\frac{-19}{4}$ c. $\frac{-31}{10}$ d. \emptyset e. NOTA

22. Find the least common multiple of $4ab^3$ and $16a^4b^2$?

- a. $4ab^2$ b. $4a^4b^3$ c. $16ab^2$ d. $16a^4b^3$
e. NOTA

23. A textbook has 23 chapters, 17 of which have an average of 29 pages each. If the book has a total of 715 pages, what is the average number of pages in each of the remaining chapters?

- a. 10 b. 27 c. 32 d. 37 e. NOTA

24. Find the greatest common factor of

$$72x^6y^{14}z^3 \text{ and } 99x^4y^{17}z^{12}$$

- a. $9x^2y^3z^9$ b. $9x^4y^{14}z^3$ c. $9x^4y^{17}z^9$
d. $9x^6y^{17}z^{12}$ e. NOTA

25. What is the slope of $3x - 2y = 5$?

- a. $\frac{-3}{2}$ b. $\frac{-2}{3}$ c. $\frac{2}{3}$ d. $\frac{3}{2}$ e. NOTA

26. If $f(x) = 3x^2 + 5x - 7$, find $f(0.75)$

- a. -9.0625 b. -1.9844 c. -1.5625
d. 12.4375 e. NOTA

27. A car travels 0.35 miles in one minute.
What is its speed in miles per hour?

- a. 3 b. 21 c. 171 d. 1260 e. NOTA

28. Solve for x: $|7x + 17| > |2x - 3|$

- a. $-4 < x < 4$ b. $x < -4$ or $x > 4$
c. $x > \frac{-14}{9}$ d. \emptyset e. NOTA

29. Given $3y + 7 = 15x - 22$, find the value of $5x - y$.

- a. $\frac{-29}{3}$ b. $\frac{5}{29}$ c. $\frac{29}{5}$ d. $\frac{29}{3}$ e. NOTA

30. Simplify: $123x^4y^7z \div 21x^5y^2z^8$

- a. $\frac{41xy^5z^7}{7}$ b. $\frac{41xz^7}{7 \cdot y^5}$ c. $\frac{41y^5}{7 \cdot x \cdot z^7}$
d. $\frac{41}{7x \cdot y^5 \cdot z^7}$ e. NOTA