

REVIEW SESSION #1
NJBST – ALGEBRA MA 005-MA 007

1. Simplify: $-5(x - 3)$

- a. $-5x - 15$
- b. $-5x + 15$
- c. $5x - 15$
- d. $5x + 15$

2. Factor: $4x^2y + 8y^2$

- a. $y(4x^2 + 8y)$
- b. $4y(x^2 + 2y)$
- c. $4x(y + 2y)$
- d. $4xy(1 + 2y)$

3. $x = -1, y = -4$, evaluate: $x - 2xy^2$

- a. 31
- b. -17
- c. 15
- d. -33

4. $(3x + 5y) - (2x - 3y) =$

- a. $x + 2y$
- b. $x + 8y$
- c. $5x + 2y$
- d. $6x + 15y$

5. $(2a + 3)(3a - 3) =$

- a. $6a^2 + 3a - 9$
- b. $6a^2 - 6a - 9$
- c. $6a^2 - 3a + 9$
- d. $6a^2 + 3a - 6$

6. $a = 3, b = -2$, find $\frac{a^2b - 3}{2a}$

- a. $\frac{5}{2}$
- b. $\frac{7}{2}$
- c. $-\frac{7}{2}$
- d. $-\frac{5}{6}$

7. Factor: $3x^2 - 5x - 12$

- a. $(3x - 12)(x + 1)$
- b. $(3x - 4)(x + 3)$
- c. $(3x + 4)(x - 3)$
- d. $(3x - 1)(x + 3)$

8. If $2y - 3 = 4$, then $y =$

- a. $\frac{1}{2}$
- b. 5
- c. 9
- d. $\frac{7}{2}$

9. If $6t - 3 = 4t + 5$

Then $t =$

- a. 4
- b. -4
- c. 1
- d. -1

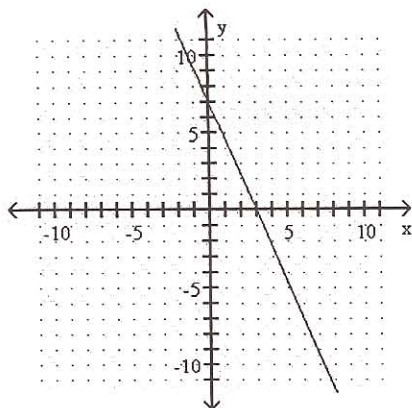
10. If John practices piano x minutes/day on Monday, Wednesday, Friday and y min/day the remaining days. What is his average practice time?

- a. $\frac{x + y}{7}$
- b. $3x + 4y$
- c. $\frac{3x + 4y}{2}$
- d. $\frac{3x + 4y}{7}$

11. $\frac{1}{2}x - 3 = \frac{1}{3}x + 3, x =$

- a. 0
- b. 32
- c. 36
- d. $\frac{1}{6}$

12. Find the equation of the graph:



- a. $y = 3x + 7$
- b. $-7x - 3y = 21$
- c. $y = -3x + 7$
- d. $7x + 3y = 21$

13. $3b - 5 = 13$, then $9b + 1 =$

- a. 55
- b. 63
- c. 6
- d. 37

14. $8\sqrt{3} + 2\sqrt{3} - 4\sqrt{3} =$

- a. $10\sqrt{3}$
- b. $-16\sqrt{27}$
- c. $6\sqrt{3}$
- d. 27

15. A factor of $2x^2 - 7x + 6 =$

- a. $2x + 1$
- b. $2x - 1$
- c. $x + 3$
- d. $2x - 3$

16. The graph of the line is given by:

- a. $y = 2x + 2$
- b. $y = \frac{1}{2}x + 2$
- c. $y = -\frac{1}{2}x + 2$
- d. $y = -2x + 2$

17. Solve: $\frac{2}{5}x < -4$

- a. $x > -10$
- b. $x < -10$
- c. $x < 10$
- d. $x > 10$

18. $9x^2 = 49$, find the solution.

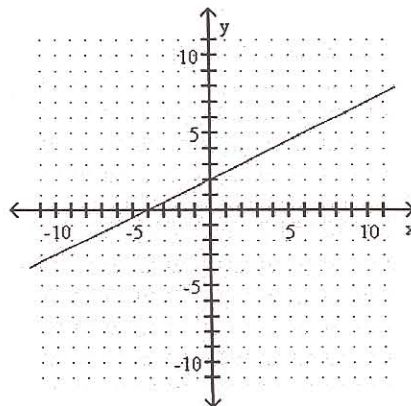
- a. $\sqrt{7}, -\sqrt{7}$
- b. $\frac{7}{3}$
- c. $\frac{7}{9}$
- d. $\frac{7}{3}, -\frac{7}{3}$

19. If y students took a basic skills exam and 27% did not pass, express the number of students who did pass:

- a. $.27x$
- b. $.27y$
- c. $.73y$
- d. $y - .27$

20. $3^{-1} =$

- a. -3
- b. $-\frac{1}{3}$
- c. $\frac{1}{3}$
- d. $\frac{1}{2}$



21. $\frac{x}{4} + \frac{x}{5} =$

- a. $\frac{2x}{9}$
- b. $\frac{x}{9}$
- c. $\frac{x}{10}$
- d. $\frac{9x}{20}$

22. $(3x)^2 =$

- a. $9x^2$
- b. $6x^2$
- c. $9x$
- d. $6x$

23. $(2x - 3y)^2 =$

- a. $4x^2 + 9y^2$
- b. $4x^2 - 9y^2$
- c. $4x^2 - 12xy + 9y^2$
- d. $4x^2 - 12xy - 9y^2$

24. $t^2 + 1 = 5$
then $t =$

- a. 2
- b. -2
- c. 2, -2
- d. 4, -4

25. $(3\sqrt{4a})^2 =$

- a. 12a
- b. 36a
- c. 18a
- d. 12a

26. if $3 + \frac{1}{x} = 2$, then $x =$

- a. 3
- b. 1
- c. -1
- d. -3

27. $x + 2y = 5$
 $x - y = 4$

what is the value of x ?

- a. $\frac{13}{3}$
- b. $-\frac{1}{3}$
- c. $\frac{1}{3}$
- d. -3

28. Which of the following is a factor of $2x^3 - 18x$?

- a. $x - 9$
- b. $x - 6$
- c. $x - 3$
- d. $x + 6$

29. $\frac{2}{x} + \frac{3}{y} =$

- a. $\frac{2x + 3y}{xy}$
- b. $\frac{3x + 2y}{xy}$
- c. $5xy$
- d. $\frac{2x + 3y}{xy}$

30. $m = \frac{nt + s}{p}$ then $t =$

- a. $mpnt$
- b. $\frac{mp - s}{n}$
- c. $\frac{mp - n}{s}$
- d. $mp - n - s$

31. $\frac{x-2}{3} = \frac{2x+1}{4}$ then $x =$

- a. $-11/2$
- b. $11/2$
- c. 9
- d. 13

32. Simplify: $\frac{x}{x+x^2}$

- a. $\frac{1}{1+x}$
- b. $\frac{x}{x+x}$
- c. $\frac{1}{x+x}$
- d. $1+x$

33. One half the difference of a number & its reciprocal:

- a. $\frac{1}{2}n - \frac{1}{n}$
- b. $\frac{1}{2}(n - \frac{1}{n})$
- c. $\frac{1}{2}(n - \frac{2}{n})$
- d. $\frac{1}{2}(\frac{n+1}{n})$

34. If x women spent \$500, find the amount spent by y women:

- a. $\frac{500x}{y}$
- b. $\frac{y}{500x}$
- c. $\frac{x}{500y}$
- d. $\frac{500y}{x}$

35. Tom invests \$600 at $p\%$ simple interest/year and \$800 at $2q\%$ simple interest. What is his total interest per year?

- a. $600p + 1600q$
- b. $6p + 16q$
- c. $19pq$
- d. $6p + 8q$

REVIEW SESSION #2
NJBST – ALGEBRA MA005-MA007

Directions: Solve and circle your choice:

1. $4 - 3(2 - x) =$

- a. $-3x - 2$
- b. $3x - 2$
- c. $-x - 2$
- d. $-x + 2$

2. $4p^2g - 10pg^2$

- a. $4p(y - 10pg)$
- b. $2pg(2p - 10g)$
- c. $2pg(2p - 5g)$
- d. $2pg(2p - 8g)$

3. If $2x + 1 = 3 - x$ then $x =$

- a. 2
- b. $\frac{4}{3}$
- c. $-\frac{2}{3}$
- d. $\frac{2}{3}$

4. If $x = -2$ then $2x^3 + x^2 + 1$

- a. -11
- b. -19
- c. 21
- d. 13

5. If $3a - 5 = 6a + 2$
Then $9a =$

- a. 21
- b. 18
- c. -18
- d. -21

6. If $x = 2$ and $y = 5$ then $\frac{20x + y^2}{x + y}$

- a. $\frac{30}{7}$
- b. $\frac{65}{7}$
- c. $\frac{45}{7}$
- d. $\frac{50}{7}$

7. $(3a + 2b)(4a - b)$

- a. $12a^2 + 11ab - 2b^2$
- b. $12a^2 + 5ab + 2b^2$
- c. $12a^2 - 2b^2$
- d. $12a^2 + 5ab - 2b^2$

8. $8x + 3 = 2x - 5$ then $x =$

- a. $\frac{1}{3}$
- b. $\frac{4}{3}$
- c. $-\frac{4}{3}$
- d. $-\frac{5}{6}$

9. If $2a + 6 = -1$
Then $a =$

- a. $-\frac{7}{2}$
- b. $\frac{5}{2}$
- c. $\frac{2}{5}$
- d. $-\frac{5}{2}$

10. $x^2 - 7x + 12 =$

- a. $(x + 4)(x + 3)$
- b. $(x + 4)(x - 3)$
- c. $(x - 4)(x + 3)$
- d. $(x - 4)(x - 3)$

11. A factor of $3x^2 + 4x - 4$ is:

- a. $x - 2$
- b. $3x - 2$
- c. $3x + 1$
- d. $x - 4$

12. A factor of $x^2 + 2x - 24$ is:

- a. $x + 6$
- b. $x + 4$
- c. $x - 8$
- d. $x - 3$

13. $6\sqrt{3} + 2\sqrt{3}$

- a. $8\sqrt{6}$
- b. 8
- c. $12\sqrt{3}$
- d. $8\sqrt{3}$

14. $\frac{2}{x} + \frac{1}{2} = 1$ Then $x =$

- a. $\frac{1}{2}$
- b. 2
- c. 4
- d. 3

15. $2x^2(4x + 5)$

- a. $8x^3$
- b. $8x^3 + 10x^2$
- c. $8x^2 + 10x^2$
- d. $8x^3 + 7x^2$

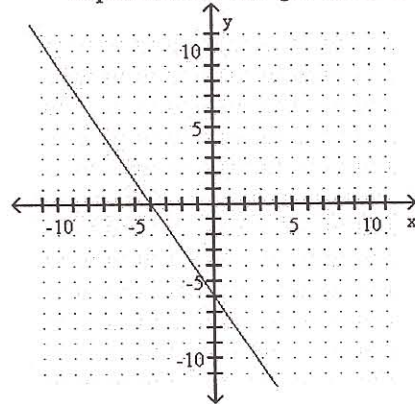
16. $\frac{3x}{4} + \frac{10x}{3} - \frac{x}{12} =$

- a. $4x$
- b. $\frac{49x}{12}$
- c. $5x$
- d. $\frac{19x}{6}$

17. Which of the following is the solution of $x^2 - x = 6$?

- a. -2
- b. +2
- c. -3
- d. -1

18. Which of the following is the equation of the given line?



- a. $y = -\frac{3}{2}x - 6$
- b. $y = -\frac{2}{3}x - 6$
- c. $y = 4x - 6$
- d. $y = -4x - 6$

19. $\begin{cases} 2x + y = 3 \\ x - y = -1 \end{cases}$ What is the value of y ?

- a. 1
- b. $\frac{2}{3}$
- c. $\frac{4}{3}$
- d. $\frac{5}{3}$

20. Mary has x 25 cents stamps & y 20 cents stamps. What is the total value of her stamps?

- a. $40xy$
- b. $25x + 20y$
- c. $40(x + y)$
- d. $x + y$

21. $\frac{a}{4} + \frac{a}{5}$

- a. $\frac{a}{9}$
- b. $\frac{9a}{20}$
- c. $\frac{a}{10}$
- d. $\frac{2a}{9}$

22. If $w + 2k^2 = v$
Then $k =$

- a. $\frac{1}{2}v - w$
- b. $\pm \sqrt{\frac{1}{2}v - w}$
- c. $\pm \sqrt{\frac{v - w}{2}}$
- d. $v - w - 2$

23. $(4a + 2b)^2$

- a. $16a^2 + 16ab + 4b^2$
- b. $16a^2 + 8ab - 4b^2$
- c. $8a^2 + 6ab - 4b^2$
- e. $16a^2 + 4b^2$

24. $\sqrt{50} - \sqrt{32}$

- a. $\sqrt{2}$
- b. $\sqrt{18}$
- c. 2
- d. $\sqrt{8}$

25. $(3\sqrt{7})^2$

- a. $6\sqrt{7}$
- b. 42
- c. 63
- d. $9\sqrt{7}$

26. $\frac{2}{x} + \frac{3}{y} =$

- a. $\frac{5}{xy}$
- b. $\frac{5}{(x + y)}$
- c. $\frac{2x + 3y}{xy}$
- d. $\frac{3x + 2y}{xy}$

27. $\begin{cases} 2x + y = 3 \\ x - y = -1 \end{cases}$

For the given system, find the value of y :

- a. $\frac{5}{3}$
- b. $-\frac{3}{5}$
- c. $-\frac{1}{5}$
- d. $\frac{1}{5}$

28. $\frac{y+2}{3} = \frac{2-y}{5}$ then $y =$

- a. $\frac{1}{2}$
- b. $-\frac{1}{2}$
- c. $\frac{2}{3}$
- d. -2

29. Write an expression for:
The difference of the square of a number and the number.

- a. $2N - N$
- b. $N^2 - N$
- c. $N - N^2$
- d. $(N - N)^2$

30. $\frac{2a}{2a^2 + 2a} =$

a. $\frac{1}{a+2}$

b. $\frac{1}{a+1}$

c. $\frac{1}{a} + 1$

d. $\frac{1}{2a+1}$

31. Solve $-3x < 6$

a. $x < -2$

b. $x < 9$

c. $x > -2$

d. $x > 2$

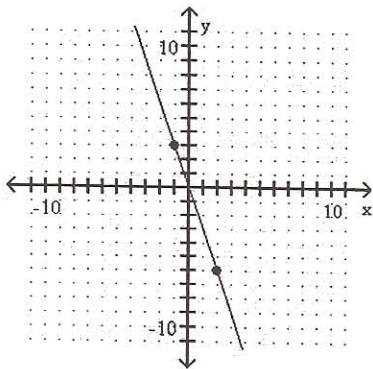
32. Find the slope of the given line:

a. 3

b. $\frac{1}{3}$

c. -3

d. -1



33. If Mary collects half as many donations as Joe and Joe collected y donations, what is the total amount of the collections?

a. y

b. $\frac{3}{y}$

c. $(\frac{3}{2})y$

d. $2y$

34. A dress costs \$84.30. If there is a 20% sale, which expression will give the total cost?

a. $84.30 - 0.20$

b. $.20(84.30)$

c. $.20(84.30) - (.20)$

d. $84.30 - .20(84.30)$

35. $b - ax = cx + d$ then $x =$

a. $\frac{b-d}{c+a}$

b. $\frac{d-b}{c+a}$

c. $\frac{b-d}{ca}$

d. $\frac{d-b}{ca}$

MA 005-007	Practice #1	Practice #2
1.	B	B
2.	B	C
3.	A	D
4.	B	A
5.	A	$-7/3$
6.	C	B
7.	C	D
8.	D	C
9.	A	A
10.	D	D
11.	C	B
12.	D	A
13.	A	D
14.	C	C
15.	D	B
16.	D	A
17.	B	A
18.	D	A
19.	C	D
20.	C	B
21.	D	B
22.	A	C
23.	C	A
24.	C	A
25.	B	C
26.	C	D
27.	A	A
28.	C	B
29.	B	B
30.	B	B
31.	A	C
32.	A	C
33.	B	C
34.	D	D
35.	B	A