Name_____ Date_____

Algebra EOC Practice B

1. Solve. $2(3)^2 \div 6 + 2(7-3)^2$
   C. 19
   D. 22
   E. 35
   F. 38

2. What function represents the following sequence: 5, 8, 11, 14, …

   G. $f(n) = 2n + 3$
   H. $f(n) = n^2 + 4$
   I. $f(n) = 3n + 2$
   K. $f(n) = n^3 + 2$

3. Which number should replace the *n* value in the table?

x	15	12	9	3	0
y	-6	-2	2	n	14

   O. 12
   P. 10
   Q. 8
   R. 6

4. What is the difference between A and B if $A = 4x^2 - 3x + 5$ and $B = 7x^2 + 8x - 1$?

   A. $-3x^2 - 11x + 6$
   B. $-3x^2 + 5x + 4$
   C. $11x^2 + 5x + 4$
   D. $11x^2 - 11x - 6$

5. John wants to rent a bicycle on vacation. The company charges a one-time fee of $8 for delivery and then an additional $5 a day. If John is on vacation for x days, what is the total cost, C, for the rental?

   C. $C = 8x + 5$
   D. $C = 13x$
   E. $C = 3x + 2$
   F. $C = 8 + 5x$

6. Simplify: $\frac{x^2-x-56}{2x^2+14}$

   U. $\frac{x-8}{2}$
   X. $x - 4$
   Y. $\frac{x-4}{x}$
   Z. $\frac{x-8}{x+7}$

7. What are the roots of the function $f(x) = x^2 + 10x - 24$?

   Q. x = 4, 6
   R. x = -4, 6
   S. x = -12, 2
   T. x = -2, 12

8. Solve. $\sqrt{x-5} + 2 = 6$

   L. 21
   M. 81
   N. 9
   O. 13

9. Sarah is making a right triangular garden. One of the legs is 6 and the hypotenuse is 12. What is the length of the other leg?

   B. $6\sqrt{5}$
   C. $6\sqrt{3}$
   D. $5\sqrt{6}$
   F. $3\sqrt{6}$

10. Simplify. $\frac{4x^3y^5z^2}{12x^2y^3z^5}$

   N. $\frac{xy^2}{3z^3}$
   P. $\frac{xy^2z^3}{3}$
   R. $\frac{3xy^2}{z^3}$
   S. $\frac{x}{3y^2z^3}$

11. Simplify. $(x + 4)(x - 7)$

   O. $x^2 - 3x - 28$
   T. $x^2 - 3x + 11$
   W. $x^2 - 28$
   Y. $x^2 - 3$

12. Which function represents the following data? 3, 5, 9, 17, …

   R. $f(x) = 3^x$
   S. $f(x) = 2x + 1$
   T. $f(x) = 2^x + 1$
   U. $f(x) = 3x + 2$

13. A fruit fly population started with 1200 fruit flies. They began dying off at a rate of 32% a day. Which function represents the population, P, at any given day x?

    D. $P(x) = 1200(1.32)^x$
    E. $P(x) = 32(1200)^x$
    F. $P(x) = 68(1200)^x$
    G. $P(x) = 1200(.68)^x$

14. What is the y value for the following system of equations?
    $2x - 4y = 6 \quad and \quad x = 5y - 3$

    R. 2
    S. 7
    W. -2
    Y. 5

15. Which ordered pair is a solution to the linear equality $3x < 2y + 5$?

    G. (3, 2)
    H. (-3, -2)
    I. (1, -1)
    L. (-2, -6)

Is your puzzle correct????

____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
4	8	2	10	1	4	14	5	6	10	9	12	2	11	10	

____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
13	14	4	3	15	7	4	7	4	7	12	14	4	2	13	15	12			

____	____	____	____	.
8	2	10	1	

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P. $\frac{xy^2z^3}{3}$

R. $\frac{3xy^2}{z^3}$

S. $\frac{x}{3y^2z^3}$

11. Simplify.

$$(x + 4)(x - 7)$$

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____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
13	14	4	3	15	7	4	7	4	7	12	14	4	2	13	15	12	

____	____	____	____	.
8	2	10	1	

Is your puzzle correct????

____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
4	8	2	10	1	4	14	5	6	10	9	12	2	11	10	

____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____	____
13	14	4	3	15	7	4	7	4	7	12	14	4	2	13	15	12	

____	____	____	____	.
8	2	10	1	

Answers:

1. E	2. I	3. P	4. A	5. F	6. U	7. S
8. L	9. C	10.N	11. O	12. T	13. G	14. R
15. H						

A linear function graphs as a straight line.

Teacher Notes:

This activity can be done individually or in groups and either at desks or hung up around the room. Give the students the 15 problems and have them work on them for before giving them their sheet to check their answers. Once they fill in the letters on the answer sheet, they will easily be able to see if they got all answers correct. If a word doesn't make sense, they know to go back and redo the problem.