

Basics of Algebra: Practice Activity

1. What is the order of operations?
Fill in the list. The first operation is done for you:

Parentheses/other grouping symbols

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2. Multiplication, division, addition and subtraction are solved:

a. right to left

b. left to right

3. what is $x^2 - 3x + 8 \div y^2$ if $x=3$ and $y=8$?

Basics of Algebra : Practice Activity.

Cont.

4. $x^3 + 4x - 2y \cdot 3 =$
if $x=4$ and $y=6$?

5. What is the difference between a numerical and algebraic expression?

6. Amy runs 6 miles per hour. Write an algebraic expression for the number of miles she runs in t hours.

7. Max makes 7 origami birds an hour. Write an algebraic expression that will show this. Then, calculate how long it will take him to make 26.

Basics of Algebra: Practice Activity Cont.

8. word bank

less than
greater than
less than or
greater than
equal to
greater than or
equal to

$\leq$ $>$ $<$ $\geq$

9. 2.25 belongs to which set/s of real numbers?

10. $\sqrt{2}$ belongs to which set/s of real numbers?

11. $-\frac{8}{72}$ belongs to which set/s of real numbers?

12. order: $\sqrt{3}$, -5 , $\frac{4}{6}$, $-\frac{7}{5}$, 1.6 , and $\frac{3}{5}$
one point is done for you:



Basics of Algebra: Practice Activity Cont.

13. Identify the properties being used below:

a. $8 + 0 = 8$ _____

b. $(2 + 4) + 8 = 2 + (4 + 8)$ _____

c. $6 \cdot 0 = 0$ _____

d. $-3 \cdot -6 = 18$ _____

e. $1 \cdot 2 \cdot 3 = 2 \cdot 1 \cdot 3$ _____

14. True or false? or open?

a. $8 - 4 = 1 + 3$

b. $20 - 8 = 6 + 18$

c. $16 - 6 = 3 + 6$

d. $5y - 4 = 2y + 8$

15. $3x + 7 = 16$ solve for x

Basics of Algebra: Practice Activity Cont.

16. rewrite and simplify using the distributive property:

$$\frac{8x + 3}{4}$$

17. Simplify: $8x + 3x - 12x^2 - 8x$

18. Simplify: $4 - 6x^2 + 2x - 3x^2 + 2$

19. $4(8x^2 - 2) + 6x^2 + 8$

Basics of Algebra: Answer Key

1. look at notes! 8. $\leq$ $>$ $<$ $>$
 less than or equal to greater than less than or equal to greater than or equal to

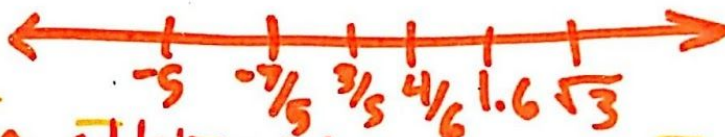
2. b. left to right 9. ~~Real~~ Rational

3. $3^2 - 9 + 8 \div 64$ 10. Irrational

$9 - 9 + 8 \div 64$

11. Rational

$\left(\frac{1}{8}\right)$



4. 44

13. a. additive identity
 b. associative
 c. multiplication zero

5. an algebraic expression has variables

d. multiply by - = opposite
 e. commutative

14. a. true
 b. false

c. false
 d. open

6. 6+

15. $x = 3$

16. $2x + \frac{3}{4}$

17. $3x - 12x^2$

18. $-9x^3 + 2x + 4$

19. $38x^2$

7. $7x$

around 3.7 hours

