Study Guide~ Unit 0

1. Complete the correct operation.
   A. -4 – (-3)   _____
   B. 6 + (-11)   _____
   C. 112/-8   _____
   D. -7 x -10   _____
   E. 11(-4)   _____

2. Does 2(10y + 7) equal 20y +7?
   Circle One: YES or   NO

3. The table shows the maximum diving depth five students achieved. List the names in order from the deepest depth to the shallowest depth.

Student	Depth
Kamyous	-2 feet
Rodney	-46 feet
Tarvaris	-25 feet
Charles	-31 feet
Zarius	-13 feet

A. Kamyous, Zarius, Charles, Tarvaris, Rodney
B. Rodney, Tarvaris, Charles, Zarius, Kamyous
C. Kamyous, Zarius, Tarvaris, Charles, Rodney
D. Rodney, Charles, Tarvaris, Zarius, Kamyous

4. Simplify the expression.$|-3|+|-9|$ _____

5. Simplify: $[(14 – 20 ÷ 4) + 1]^2$
A. 100   B. 10   C. -18   D. 18

6. One winter day, the temperature ranged from a high of 40ºF to a low of -5ºF. By how many degrees did the temperature change?
A. 45ºF   B. 35ºF   C. 25ºF   D. 55ºF

7. Which one of the following is an example of an irrational number? _____
A. $\sqrt{13}$ B. $\sqrt{16}$ C. $\sqrt{25}$ D. $\sqrt{100}$

8. Simplify.
A) $\sqrt{16}$ = _____   B) $\sqrt[3]{27}$ = _____   C) 4^3 = _____

9. Combine. -4x + 2y -3x + 2y + 5

10. Combine. 2v – 3v + 5m

11. Write a verbal expression for 4x – 9.
_____

12. Write an algebraic expression for two times a number, m, plus thirteen.
_____

13. Which one of the following is NOT a characteristic of a rational number?
   A. It can be expressed as a fraction.
   B. It cannot be expressed as a fraction.
   C. It can be a repeating decimal.
   D. It can be a terminating decimal.

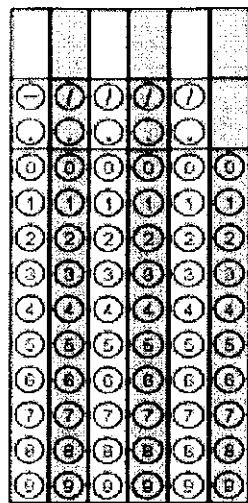14. Which of the following is a characteristic of an irrational number?
   A. It has a repeating decimal.
   B. It consists of all square roots.
   C. It cannot be expressed as a fraction.
   D. It is a terminating decimal.

15. Simplify. 13(-4 – 3)

16. 3 + 5(10/2) – 15

17. Simplify. $|-4|+|6|$

[bubble answer grid]

18. Solve.
$45 + 16 \times 2 \div 4 - 6$

[bubble answer grid]

19. $-6(x + 8)$ if $x = -2$

[bubble answer grid]
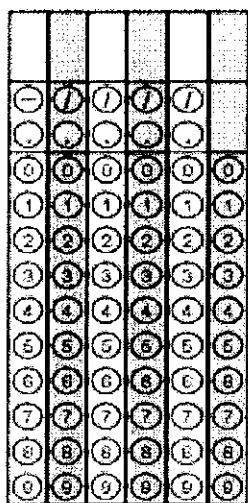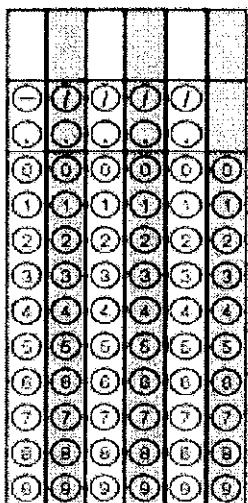
20. Distribute. $4(7 - 6b)$
A. $28 - 6b$ B. $28 - 24b$
C. $4b$ D. $28 + 24b$

21. Distribute. $-3(1 - 5x)$ _____

Match the vocabulary word to the correct definition.

22. ___ Coefficient
23. ___ Exponent/Power
24. ___ Like Terms
25. ___ Absolute Value
26. ___ Rational Numbers
27. ___ Integers
28. ___ Terminating

A. Distance from 0
B. a number multiplied by a variable.
C. To Stop
D. Any number that can be written as a fraction
E. shows how many times the base number will be multiplied by itself.
F. same variables, raised to same power
G. whole numbers and their opposites

True/False
If false, explain why on the line provided.

29. T   F   All negative numbers are irrational.
_____

30. T   F   Whole numbers, integers and 0 are rational.
_____

31. T   F   Decimals that repeat or terminate are rational.
_____

32. T   F   The additive inverse of a number is always positive.
_____

33. T   F   The absolute value of a number is always positive.
_____

34. Place the following numbers in the correct category.

$4.\overline{5}$ -9 $7.293623...$ $\dfrac{18}{0}$ $\sqrt{81}$

π $^5/_8$ 39 $\sqrt{-17}$ 6.9

Rational	Irrational	Non-Real

Write as a Fraction.

35) $.\overline{242} =$

36) $.\overline{12} =$

37) $.01\overline{8} =$

Approximate.

38) $\sqrt{67}$ is between what two integers on the number line?

39) $\sqrt{123}$ is between what two integers?

Solve.

40) $.\overline{8} \times 4\frac{1}{3} =$

41) $3\frac{1}{3} \div .\overline{06} =$