

STUDY GUIDE

1. COMPLETE THE FOLLOWING

a. $-4 - (-2)$ —

b. $6 + (-12)$ —

c. $110 \div -5$ —

d. -3×12.5 —

e. $12 (-5.25)$ —

f. $-4.27 \div 1.25$ —

g. $-\frac{1}{2} \times -\frac{2}{3}$ —

h. $3\frac{1}{2} \times -2\frac{2}{3}$ —

i. $-122 \div 2$ —

2. Simplify the expression
 $| -3 | + | -9 | =$

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. Which one of the following is an example of an irrational number?

- A. $\sqrt{13}$ B. $\sqrt{16}$ C. $\sqrt{25}$ D. $\sqrt{100}$

5. LABEL RATIONAL OR IRRATIONAL

a. $\sqrt{2}$

b. $\frac{3}{2}$

c. $\sqrt[3]{27}$

d. π

e. $-\frac{5}{2}$

6. Which one of the following is NOT a characteristic of a rational number?

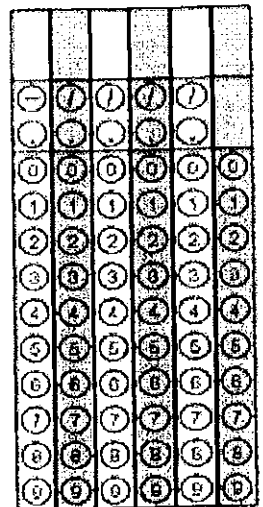
- A. It can be expressed as a fraction.
- B. It cannot be expressed as a fraction.
- C. It can be a repeating decimal.
- D. It can be a terminating decimal.

7. 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.

8

Simplify $| -4 | + | 6 |$



9. True/False
 If false, explain why on the line provided.
 T F All negative numbers are irrational.

T F Whole numbers, integers and 0 are rational.

T F Decimals that repeat or terminate are rational.

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

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

10. Place the following numbers in the correct category.

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

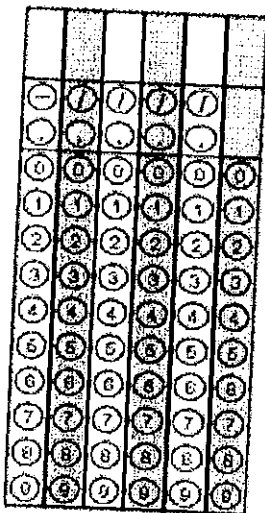
π $\frac{5}{8}$ 39 $\sqrt{-17}$ 6.9

Rational

Irrational

Non-Real

11 Write as a fraction
 $.0\overline{19}$. Place
 answer on gridded
 response



12. Simplify
 $3.\overline{03} \times 1\frac{1}{2}$

13. Write as a fraction
 $\overline{.341}$

$\overline{.12}$

Approximate

14 a) $\sqrt{79}$ is between what two integers.

b) place $\sqrt{79}$ on a number line.

15. a) $\sqrt{139}$ is between what two integers

b) place $\sqrt{139}$ on a number line

Solve

16. $3\frac{1}{3} \div \overline{.06}$

Simplify

17. a. $\sqrt{16}$

b. $\sqrt[3]{27}$

c. 4^3

Word Problems

18. The price decreased \$1.50 per week for 3 months. What was the total change over the 3 month period?
19. The boiling point of Hydrogen is -105°C while the melting point is -45°C . What is the difference between melting and boiling point?