

Grade 7: Rational/Irrational Study Guide *-* You may NOT use a calculator on this side.*-*

- 1 “A **rational number** is any value that can be written in a fraction form using an integer for the denominator and an integer for the numerator.” Is this statement true or false? Circle one.

True

False

Please evaluate the expression. (2 pts. each)

2 $9.52 + 2.8$

2.) _____

3 $-9.52 + (-2.8)$

3.) _____

4 $9.52 - 2.8$

4.) _____

5 $2.8 - 9.52$

5.) _____

6 $9.52 \cdot 2.8$

6.) _____

7 $-9.52 \cdot (-2.8)$

7.) _____

Please change the decimals to fractions.

8 0.9

8.) _____

9 4.25

9.) _____

10 $0.\bar{6}$

10.) _____

Please evaluate the expression. (2 pts. each)

11 $10 - \sqrt{49}$

11.) _____

12 $10\sqrt{49}$

12.) _____

Please estimate the value of the irrational square root.

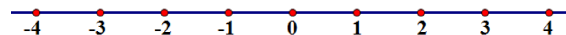
13 $\sqrt{65}$

13.) $\approx$ _____

14 $\sqrt{23}$

14.) $\approx$ _____**Please place the numbers in the correct positions on the number line.** (3 pts.)

15 -3.5 $\sqrt{8}$ $\sqrt{9}$



Name: _____

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You MAY use a calc. on this side of the quiz.

Please change the fractions to decimals.

16 $\frac{3}{5}$

16.) _____

17 $9\frac{3}{4}$

17.) _____

18 $\frac{2}{9}$

18.) _____

Please complete the statement with $>$, $<$, or $=$.

19 $\frac{6}{7}$ _____ 0.8

20 $\frac{9}{11}$ _____ $\frac{8}{9}$

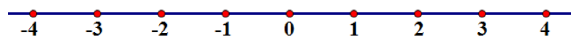
Find the prime factorization. (2 pts.)

21 180 $\leftarrow$ the number of school days in one year

21.) _____

Please place the numbers in the correct positions on the number line. (3 pts.)

22 $\frac{5}{2}$ $-\frac{5}{2}$ $\frac{11}{5}$



23 This will be a two-part

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Answer Section

- | | |
|----|----------------------------------|
| 1 | T |
| 2 | 12.32 |
| 3 | -12.32 |
| 4 | 6.72 |
| 5 | -6.72 |
| 6 | 26.656 |
| 7 | 26.656 |
| 8 | $\frac{9}{10}$ |
| 9 | $4\frac{1}{4}$ or $\frac{17}{4}$ |
| 10 | $\frac{2}{3}$ |
| 11 | 3 |
| 12 | 70 |
| 13 | 8.06225774829855 |
| 14 | 4.79583152331272 |
| 15 | See key. |
| 16 | 0.6 |
| 17 | 9.75 |
| 18 | $0.\bar{2}$ |
| 19 | > |
| 20 | < |
| 21 | $2^2 \bullet 3^2 \bullet 5$ |
| 22 | See key. |
| 23 | ??? |