

Name _____

Date _____

Mrs. Roumbos

Homework

8A Period _____

1) Which number is rational?

- 1) π
- 2) $\frac{5}{4}$
- 3) $\sqrt{7}$
- 4) $\sqrt{\frac{3}{2}}$

2) Which is a rational number?

- 1) $\sqrt{8}$
- 2) π
- 3) $5\sqrt{9}$
- 4) $6\sqrt{2}$

3) Which expression is rational?

- 1) π
- 2) $\sqrt{\frac{1}{2}}$
- 3) $\sqrt{3}$
- 4) $\sqrt{\frac{1}{4}}$

4) The value of $\sqrt{x^2 - 9}$ is a real and irrational number when x is equal to

- 1) 5
- 2) 0
- 3) -3
- 4) 4

5) Which number below is irrational?

$$\sqrt{\frac{4}{9}}, \sqrt{20}, \sqrt{121}$$

Why is the number you chose an irrational number?

6) The number 0.14114111411114... is

- 1) integral
- 2) rational
- 3) irrational
- 4) whole

7) Which expression represents an irrational number?

- 1) $\sqrt{2}$
- 2) $\frac{1}{2}$
- 3) 0.17
- 4) 0

8) Which number is irrational?

- 1) $\sqrt{9}$
- 2) $\sqrt{8}$
- 3) 0.3333
- 4) $\frac{2}{3}$

9) Which is an irrational number?

- 1) $0.\bar{3}$
- 2) $\frac{3}{8}$
- 3) $\sqrt{49}$
- 4) π

10) Given: $\frac{\sqrt{99}}{11}, \sqrt{164}, \sqrt{196}$

Identify the expression that is a rational number and explain why it is rational.

Homework #5 continued

Name: _____

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1. Is the product of $\sqrt{16}$ and $\frac{4}{7}$ rational or irrational? Explain your reasoning.

3. Which expression results in a rational number?

A. $\sqrt{121} - \sqrt{21}$

B. $\sqrt{25} \cdot \sqrt{50}$

C. $\sqrt{36} \div \sqrt{225}$

D. $3\sqrt{5} + 2\sqrt{5}$

2. Is the product of $\sqrt{1024}$ and -3.4 rational or irrational? Explain your answer.

4. Jakob is working on his math homework. He decides that the sum of the expression $\frac{1}{3} + \frac{6\sqrt{5}}{7}$ must be rational because it is a fraction. Is Jakob correct? Explain your reasoning.