

Name _____

(FUN2) The Basics - 5

Today, you will be able to:

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OPERATIONS WITH RATIONAL AND IRRATIONAL NUMBERS:

“TOP FIFTEEN”

1. State whether $7 - \sqrt{2}$ is rational or irrational. Explain your answer.

2. Determine if the product of $3\sqrt{2}$ and $8\sqrt{18}$ is rational or irrational. Explain your answer.

3. Given:

$$L = \sqrt{2}$$
$$M = 3\sqrt{3}$$
$$N = \sqrt{16}$$
$$P = \sqrt{9}$$

Which expression results in a rational number?

(1) $L + M$

(3) $N + P$

(2) $M + N$

(4) $P + L$

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.