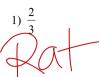
## Rational or Irrational

## Identify the following as rational or irrational.



3) 4.575

- 5)  $\sqrt{147}$ 122
- 9) π
- 11)  $\sqrt{27} + \sqrt{3} = 4\sqrt{3}$
- 13)  $3 + \sqrt{5}$ 1PR
- 15)  $2\sqrt{10} \cdot \sqrt{20}$ 201/2 -> IRR

4) 18.45 RepeatS Rat

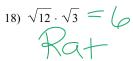
- $6) \sqrt{100} = 0$

- 12) 4 + 0.28 = 4.28Rat
- 14)  $3\sqrt{5} \sqrt{20} = \sqrt{5}$ IRR
- 16)  $\sqrt{10} \cdot 4\sqrt{10} = 4$

17) 
$$\sqrt{6} \cdot 7$$



$$19) \frac{5}{6} + \frac{3}{4} = \frac{19}{12}$$



20) 20.35 + 2.45

22.8 Rat

Identify each of the following as rational or irrational. Then choose the appropriate rule that justifies your answer.

## Rules

- A. The sum of two rational numbers is always rational.
- (B. The sum of two irrational numbers is sometimes irrational.
  - C. The sum of two irrational numbers is sometimes rational.
  - D. The sum of one rational number and one irrational number is always irrational.

MUHIPLY

E. The product of two rational numbers is always rational.

- F. The product of two irrational numbers is sometimes rational.
- G. The product of two irrational numbers is sometimes irrational.
- H. The product of one rational number and one irrational number is sometimes irrational.
- I. The product of one rational number and one irrational number is sometimes rational.

21) 
$$6 + \sqrt{4} = 8$$
  
Rat  $+ Rat = Rat$ 

22) 
$$2 \times 4.5 = 9$$
Rat • Rat = Rat

23) 
$$\sqrt{6} + 8 = 10$$
.

RR + Rat = IRR

$$\begin{array}{c}
24) \sqrt{10} \cdot \sqrt{3} = \sqrt{36} \\
RP \cdot |PP = |PP | 
\end{array}$$

$$25) \sqrt{12} \cdot \sqrt{3} = 0$$

$$| RR | RR = Rat$$

$$\begin{array}{c}
27) \sqrt{5} \cdot 0 = 0 \\
|PP \cdot Pat = Rat
\end{array}$$

29) 
$$3\sqrt{5} - 3\sqrt{5} = 0$$
 $|RR - |RR = Rat$ 

26) 
$$\sqrt{5} + \sqrt{15}$$
 $|PP + |PP = |PP|$ 

$$|RR \cdot Rat = |RR|$$

30) 
$$3\sqrt{2} \cdot \sqrt{8} = \mathbb{R}$$

$$|\mathbb{R} \mathbb{R} - |\mathbb{R} \mathbb{R} - \mathbb{R} = \mathbb{R}$$

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