Properties of Irrational Numbers Exit Quiz   **Math 8**

ANSWERS

Multiple choices

1. **Name the property of irrational numbers illustrated by the equation.**
    $$\sqrt{5}(\sqrt{5} + \sqrt{2}) = 5 + \sqrt{10}$$
    a.) Associative Property of Addition   **b.)** ==Distributive Property==

    c.) Associative Property of Multiplication   **d.)** Commutative Property of Multiplication

2. **Name the property of irrational numbers illustrated by the equation.**
    $$\sqrt{3}(\sqrt{7} * \sqrt{10}) = (\sqrt{3} * \sqrt{7})\sqrt{10}$$
    a.) Associative Property of Addition   **b.)** Commutative Property of Multiplication

    c.) ==Associative Property of Multiplication==   **d.)** Distributive Property

3. **The $\sqrt{21}$ is between which two integers?**

    a.) ==3 and 7==   **b.)** 9 and 12

    c.) 10 and 11   **d.)** 7 and 14

Solve each expression. Identify if the answer will be rational or irrational.

4. **If $x = \sqrt{5}$ and $y = 16$, what is the value of $2x^2 - 3y - \sqrt{y}$?**

    $x = \sqrt{5}$
    $y = 16$

    $2x^2 - 3y - \sqrt{y} =$
    $= 2 * (\sqrt{5})^2 - 3 * 16 - \sqrt{16} =$
    $= 2 * 5 - 3 * 16 - 4 =$
    $= 10 - 48 - 4 =$
    $= -38 - 4 =$
    ==$= -42$==
    ==Rational==

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5. If $x = 15$ and $y = \sqrt{6}$, what is the value of $x\,y^2 - \left(3y + \sqrt{x}\right)$?

$x = 15$
$y = \sqrt{6}$

$x\,y^2 - \left(3y + \sqrt{x}\right) =$
$= 15\left(\sqrt{6}\right)^2 - \left(3\sqrt{6} + \sqrt{15}\right) =$
$= 15 * 6 - 3\sqrt{6} - \sqrt{15} =$
$= 90 - 3 * 2.4494\ldots. -3.8729\ldots\ldots. =$
$= 90 - 7.3482\ldots. -3.8729\ldots =$
$= 82.6518\ldots.. -3.8729\ldots.$
$= 78.7789\ldots..$
Irrational