

Math 172 – Section 1.5: Properties of Reals Worksheet

State whether the following equations are true or false for all real numbers.

1. $a + (-a) = -a + a = 0$ _____

2. $a \div (c + 2) = a \div c + a \div 2$ _____

3. $a(b + c) = (b + c) \cdot a$ _____

4. $\frac{z+3}{z+5} = \frac{3}{5}$ _____

5. $2(xy) = (2x)(2y)$ _____

6. $3x^2yz \cdot 0 = 3x^2yz$ _____

7. $(a - b) + c = a - (b + c)$ _____

8. $y \div \frac{1}{y} = 1$ _____

9. $4az + 16a^2 = 4a(z + 4a)$ _____

10. $(a + b)^2 = a^2 + b^2$ _____

Solutions: The first, third, and ninth are true. The rest are false.