

**Exercise 7**

*Yes or No?* If *No*, give a reason. Assume that  $a$  and  $b$  are nonzero real numbers.

(a) Is  $a - b$  equal to  $b - a$ ?

(b) Is  $-2(a - 5)$  equal to  $-2a - 10$ ?

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**Solution**

(a) No.

(b) No.

Consider  $a = 2$  and  $b = 4$ .

$$a - b = 2 - 4 = -2$$

$$b - a = 4 - 2 = 2$$

$$-2(a - 5) = -2(2 - 5) = 6$$

$$-2a - 10 = -2(2) - 10 = -14$$

Applying the distributive law correctly gives  $-2(a - 5) = (-2)(a) + (-2)(-5) = -2a + 10$ .