

Additional Practice on evaluating algebraic expressions

1. Evaluate $ax - by$ for the following values of the variables:

(a) $a = 2$, $b = 1$, $x = -\frac{3}{2}$, $y = 4$.

(b) $a = 3$, $b = 5$, $x = \frac{1}{2}$, $y = \frac{2}{3}$

(c) $a = -2$, $b = -\frac{5}{6}$, $x = \frac{1}{3}$, $y = -6$

(d) $a = \frac{2}{3}$, $b = \frac{3}{4}$, $x = -\frac{5}{2}$, $y = -\frac{20}{9}$

2. For each of the following indicate whether they are true or false:

(a) If $x = -2$ and $y = \frac{3}{5}$ then $3x = 5y - 9$.

(b) If $x = \frac{2}{3}$, $y = \frac{3}{5}$ then $2x - 3y = -\frac{7}{15}$.

(c) If $x = \frac{2}{3}$, $y = \frac{3}{2}$, and $z = \frac{5}{6}$ then $2z < x + 3y$.

(d) If $x = -\frac{3}{7}$ and $y = \frac{5}{6}$ then $\left| \frac{1}{2}x - 3y \right| > \frac{25}{14}$