

Solving algebraic fractions (one fraction equal to another)



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1. Match the pairs of equivalent equations.

$$\frac{(a - 2)}{3} = \frac{a}{2}$$

$$\frac{a}{2} = \frac{(a + 1)}{3}$$

$$\frac{a}{2} = \frac{(a - 1)}{3}$$

$$3a = 2(a + 1)$$

$$2(a - 2) = 3a$$

$$3a = 2a - 2$$

2. Solve the equations.

a) $\frac{a}{2} = \frac{(a + 1)}{3}$

b) $\frac{a}{2} = \frac{(a - 1)}{3}$

c) $\frac{(a - 2)}{3} = \frac{a}{2}$

d) $\frac{2a}{2} = \frac{(2a - 1)}{3}$



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3. In each case, the equations are equivalent.

Find the missing values.

a)

$$\frac{(a - 5)}{\square} = \frac{(a + 1)}{2}$$

$$\square(a - 5) = 3(a + 1)$$

b)

$$\frac{(a - 5)}{3} = \frac{(\square a + 1)}{\square}$$

$$2a - \square = 6a + \square$$

4. Solve for a.

a) $\frac{(a - 1)}{2} = \frac{(a + 1)}{3}$

b) $\frac{(a + 1)}{2} = \frac{(a - 1)}{3}$

c) $\frac{(2a - 2)}{2} = \frac{(5a + 1)}{3}$

d) $\frac{(3a + 5)}{2} = \frac{(2a - 2.5)}{3}$

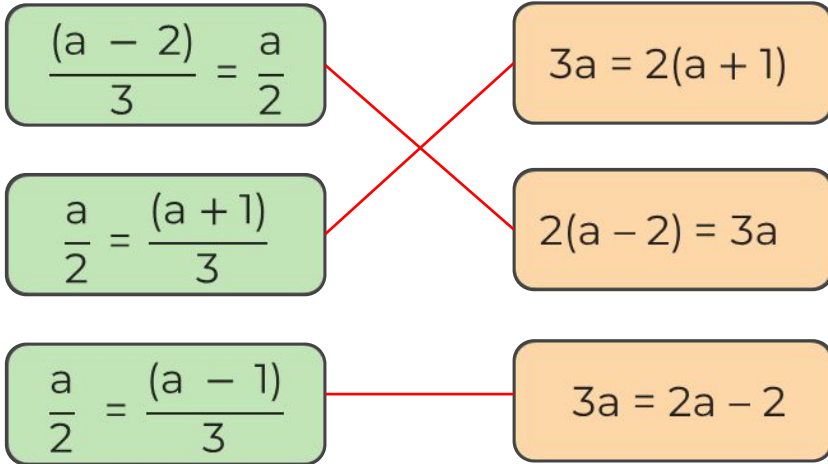


Answers



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1. Match the pairs of equivalent equations.



2. Solve the equations.

a) $\frac{a}{2} = \frac{(a + 1)}{3}$ $a = 2$

b) $\frac{a}{2} = \frac{(a - 1)}{3}$ $a = -2$

c) $\frac{(a - 2)}{3} = \frac{a}{2}$ $a = -4$

d) $\frac{2a}{2} = \frac{(2a - 1)}{3}$ $a = -1$



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3. In each case, the equations are equivalent.

a)

$$\frac{(a - 5)}{3} = \frac{(a + 1)}{2}$$

$$2(a - 5) = 3(a + 1)$$

$$\frac{(a - 5)}{3} = \frac{(2a + 1)}{2}$$

$$2a - 10 = 6a + 3$$

4. Solve for a.

a) $\frac{(a - 1)}{2} = \frac{(a + 1)}{3}$ $a = 5$

b) $\frac{(a + 1)}{2} = \frac{(a - 1)}{3}$ $a = -5$

c) $\frac{(2a - 2)}{2} = \frac{(5a + 1)}{3}$ $a = -2$

d) $\frac{(3a + 5)}{2} = \frac{(2a - 2.5)}{3}$ $a = -4$

