Solve Inequalities with Unknowns on Both Sides

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Maths

Solve Inequalities with Unknowns on Both Sides

1. True or false?

a) $2a - a + 5 = a + 5$

b) $3a - 3 + 2a + 4 = 5a + 6$

2. Here is a bar model,

Which inequality does the bar model represent?

$3t < 5$ $2t > t + 5$ $2t < t + 5$

3. Solve.

a) $2a < a + 5$

b) $3a \leq 2a + 5$

c) $4a > 2a + 10$

4. Simplify and solve.

a) $t + 3t \geq 20 + 2t$

b) $4t < -20 + t + t$

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5. Solve.

a) $3y + 2 < 2y + 10$

b) $4a - 2 < 2a + 10$

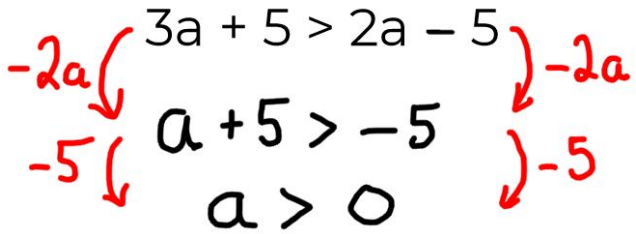
c) $5t + 2 \geq 2t - 10$

6. Simplify and solve.

a) $5a + 2 > 2a + 10 + a$

b) $3(t + 2) \leq 2t + 10$

7. Spot the mistake.



8. Represent the inequality
$3y + 9 \geq 2y + 8$ on the number line.

Answers

Solve Inequalities with Unknowns on Both Sides

1. True or false?

a) $2a - a + 5 = a + 5$ True

b) $3a - 3 + 2a + 4 = 5a + 6$

False, $5a + 1$

2. Here is a bar model,

Which inequality does the bar model represent?

$3t < 5$ | $2t > t + 5$ | $2t < t + 5$

3. Solve.

a) $2a < a + 5$ $a < 5$

b) $3a \leq 2a + 5$ $a \leq 5$

c) $4a > 2a + 10$ $a > 5$

4. Simplify and solve.

a) $t + 3t \geq 20 + 2t$ $t \geq 10$

b) $4t < -20 + t + t$ $t < -10$

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5. Solve.

a) $3y + 2 < 2y + 10$ $y < 8$

b) $4a - 2 < 2a + 10$ $a < 6$

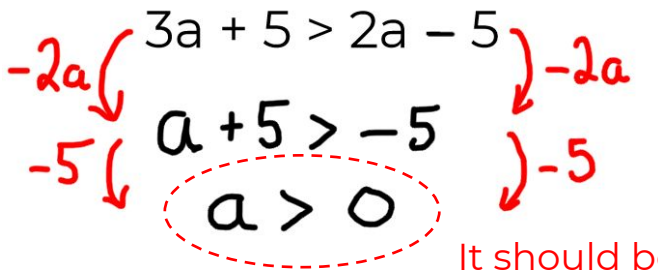
c) $5t + 2 \geq 3t - 10$ $t \geq -4$

6. Simplify and solve.

a) $5a + 2 > 2a + 10 + a$ $a > 4$

b) $3(t + 2) \leq 2t + 10$ $t \leq 4$

7. Spot the mistake.



It should be a > - 10

8. Represent the inequality $3y + 9 \geq 2y + 8$ on the number line.