

Name : \_\_\_\_\_

Score : \_\_\_\_\_ Date : \_\_\_\_\_

## Inequalities Worksheet

Solve the following inequalities.

①  $6 - b < 8 - 4b$

②  $4\left(x + \frac{1}{2}\right) - 2\left(x + \frac{3}{2}\right) \leq 5$

③  $-1 < x + 2 < 5$

④  $3(y + 5) \leq 2(y + 1)$

⑤  $-5(u - 19) \leq -6 + 2u$

⑥  $3 - 2(n - 4) > -1$

⑦  $4r + 3 > 2r + 11$

⑧  $(x - 5)(x - 2) \leq 0$

⑨  $x^2 + 7x + 10 < 10$

⑩  $\frac{x^2 + 6}{2} \geq 53$

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## Inequalities Worksheet

### Answers

①  $6 - b < 8 - 4b$

$$b < \frac{2}{3}$$

③  $-1 < x + 2 < 5$

$$-3 < x < 3$$

⑤  $-5(u - 19) \leq -6 + 2u$

$$u \geq \frac{101}{7}$$

⑦  $4r + 3 > 2r + 11$

$$r > 4$$

⑨  $x^2 + 7x + 10 < 10$

$$-7 \leq x \leq 0$$

②  $4(x + \frac{1}{2}) - 2(x + \frac{3}{2}) \leq 5$

$$x \leq 3$$

④  $3(y + 5) \leq 2(y + 1)$

$$y \leq -13$$

⑥  $3 - 2(n - 4) > -1$

$$n < 6$$

⑧  $(x - 5)(x - 2) \leq 0$

$$2 \leq x \leq 5$$

⑩  $\frac{x^2 + 6}{2} \geq 53$

$$x \leq -10 \text{ or } x \geq 10$$