



THIRD SPACE
LEARNING

Graphing Inequalities Worksheet

Algebra

Grades 9 to 12

Skill Questions

Name:

Date:

- 1 Write the inequality represented by the number line below.



Answer

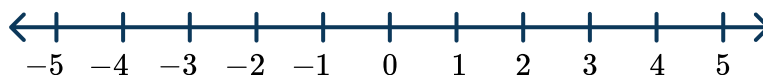
- 2 Write the inequality represented by the number line below.



Answer

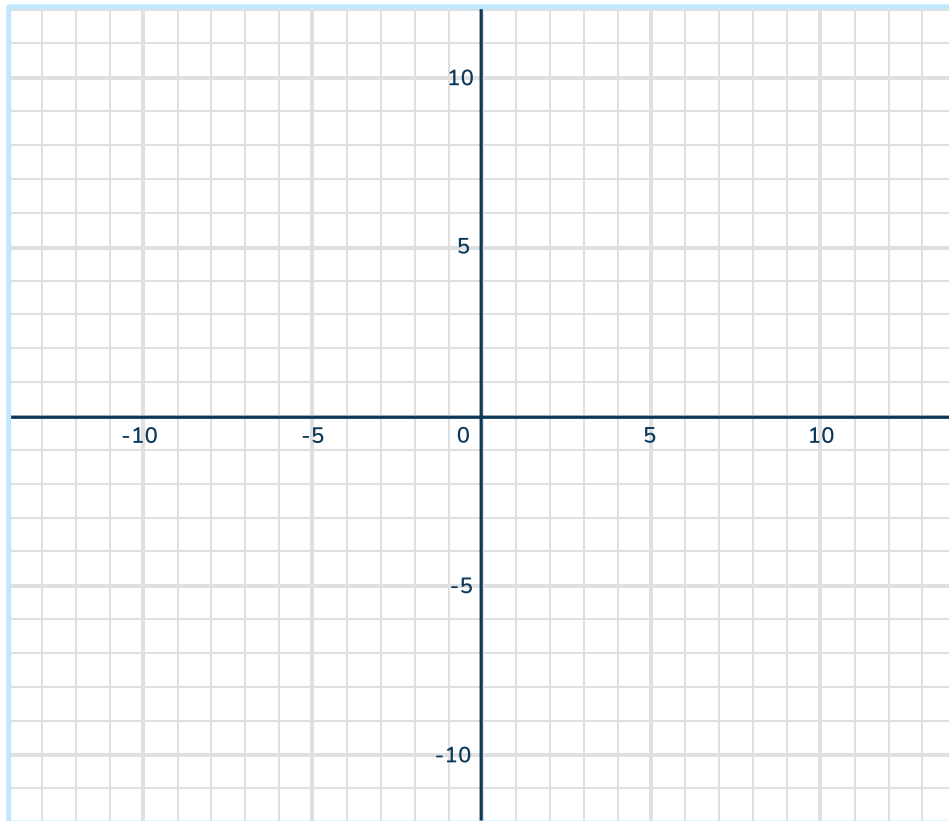
- 3 Graph the inequality on the number line.

$$x \leq -2$$

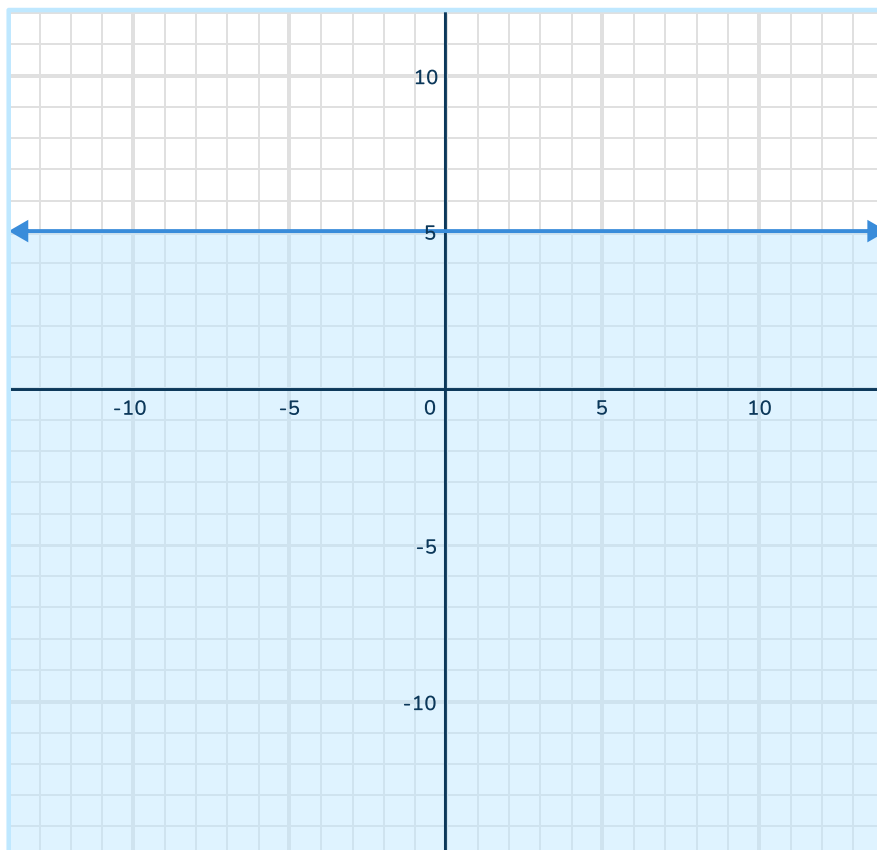


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- 4 Graph and shade the region represented by the inequality, $x < 3$, on the coordinate plane.



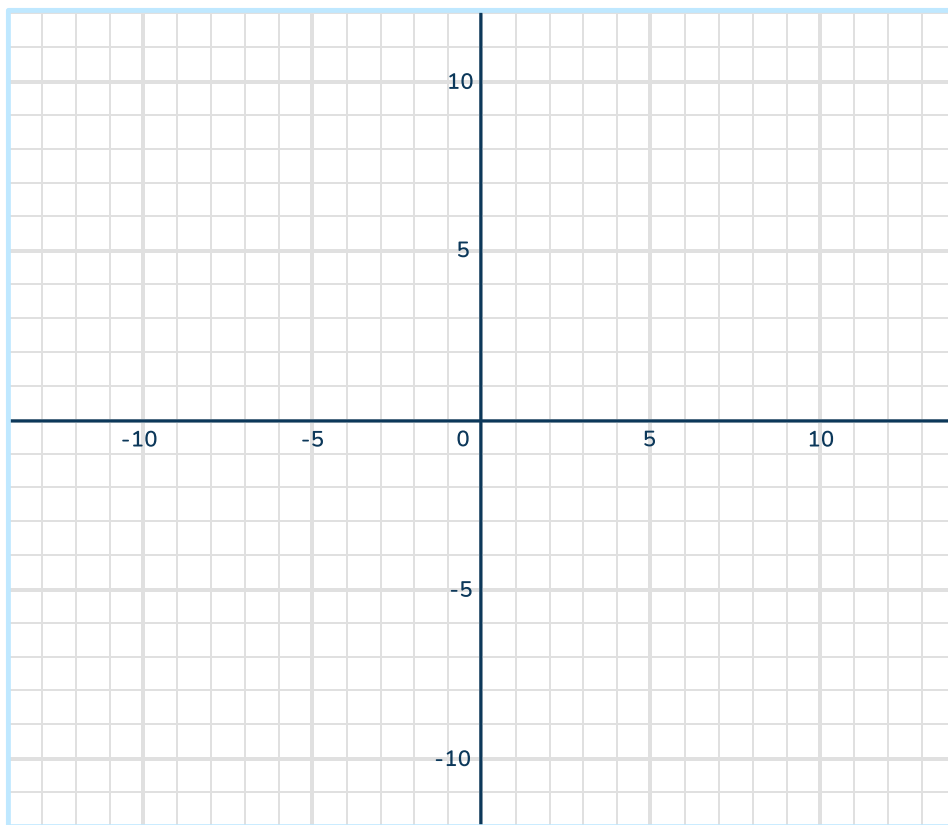
- 5 Write the inequality represented by the graph below.



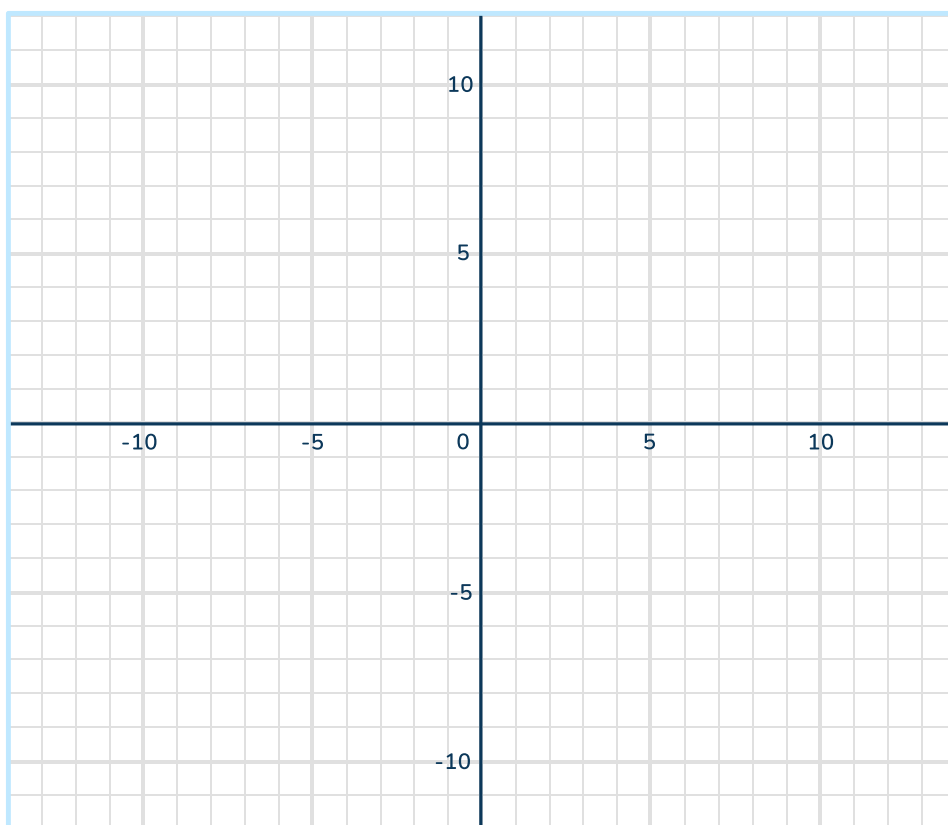
Answer

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- 6 Graph and shade the region bounded by the inequality, $-3 \leq x \leq 5$



- 7 Shade the region that is bounded by the inequality, $y < -x + 3$.

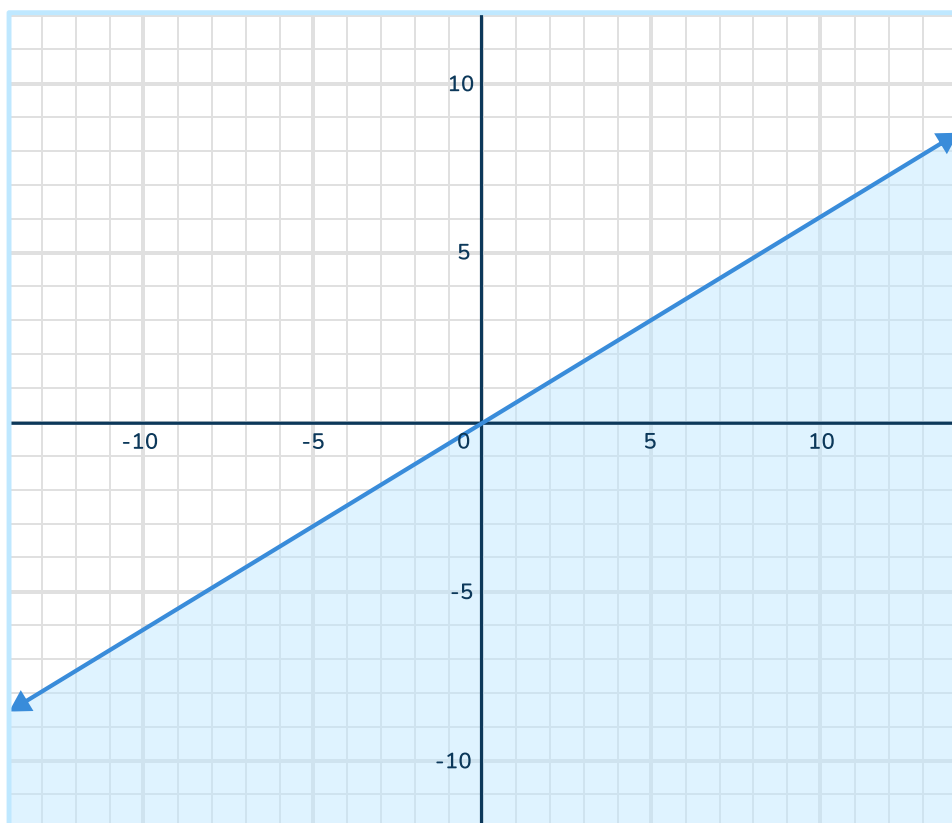


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- 8 Shade the region that is bounded by the inequality, $2y - x \geq 8$.



- 9 Write the inequality represented in the graph below.



Answer

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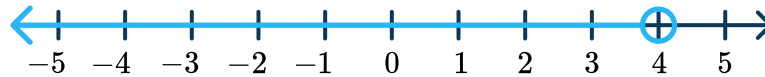
10 Write the inequality represented in the graph below.



Answer

Applied Questions

- 11 Julia graphed the inequality, $4 < x$ on the number line below. Explain if her graph is correct



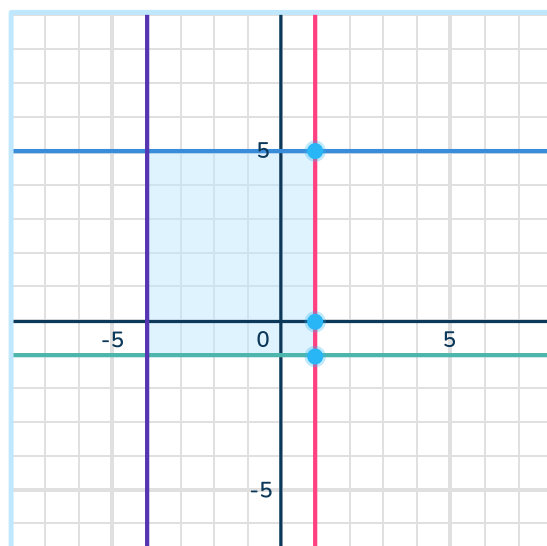
Answer

- 12 Find the shaded region bounded by the inequalities,
 $x \geq 0$, $x \leq 4$, $y \geq 0$, and $y \leq 7$

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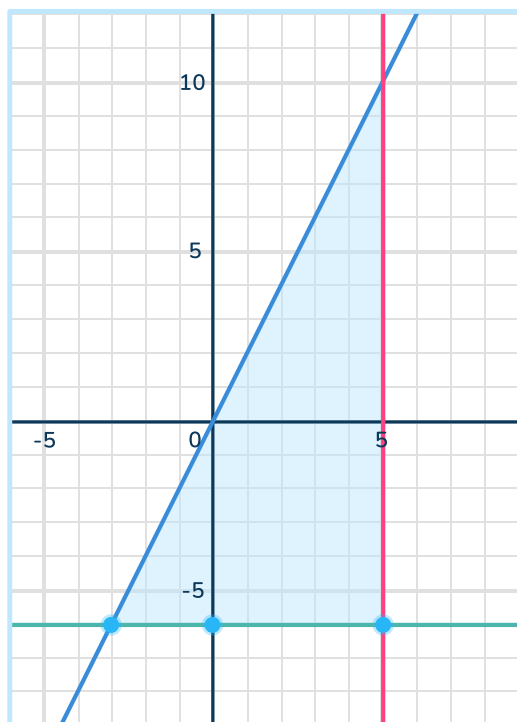
- 13 Find the shaded region bounded by the inequalities, $x \geq 0$, $y \geq 0$, and $y \leq -x + 4$

- 14 Write the inequalities bounded by the shaded region below.






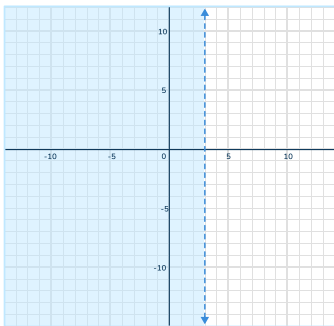
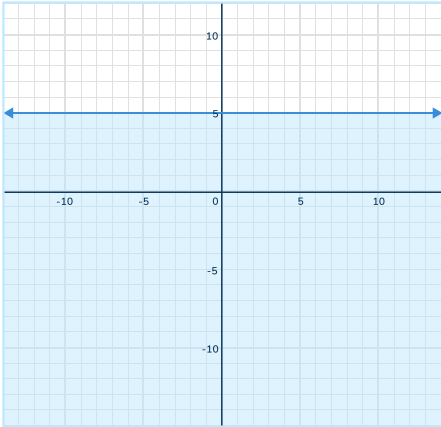
Answer

- 15 Write the inequalities bounded by the shaded region below.

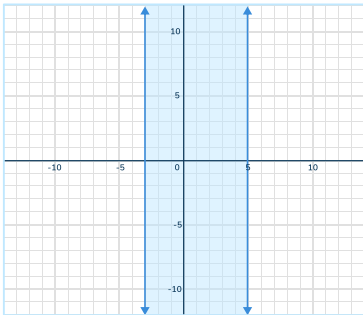
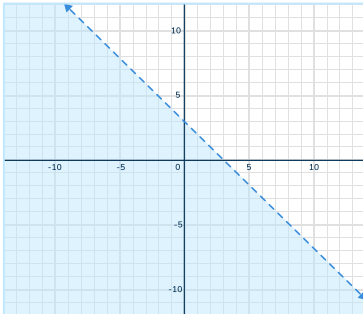
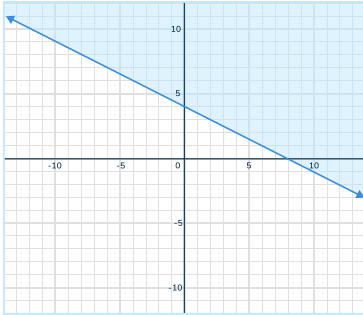
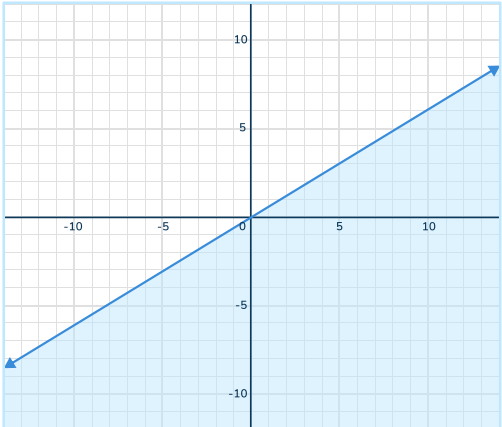


Answer

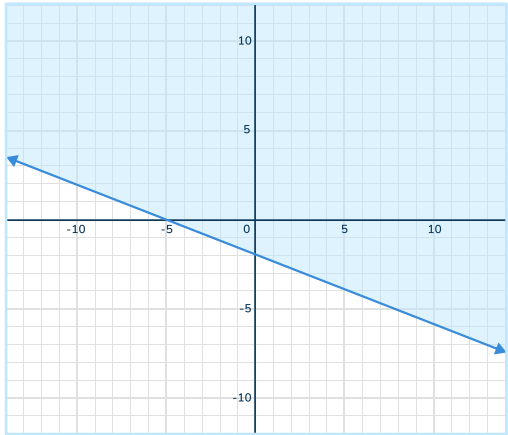
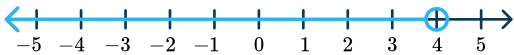

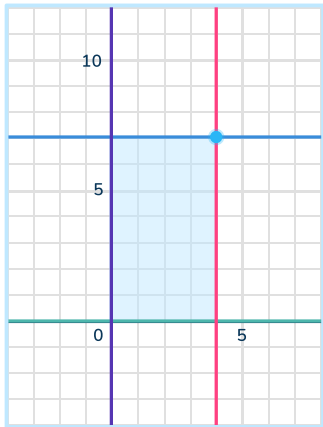
Answers

| Question number | Question | Answers | Standard |
|-----------------|---|--|---------------|
| 1 | Write the inequality represented by the number line below.  | $x \geq 3$ | 6.EE.B.8 |
| 2 | Write the inequality represented by the number line below.  | $x < 6$ | 6.EE.B.8 |
| 3 | Graph the inequality on the number line. $x \leq -2$ |  | 6.EE.B.8 |
| 4 | Graph and shade the region represented by the inequality, $x < 3$, on the coordinate plane. |  | HS.A.REI.D.12 |
| 5 | Write the inequality represented by the graph below.  | $y \leq 5$ | HS.A.REI.D.12 |

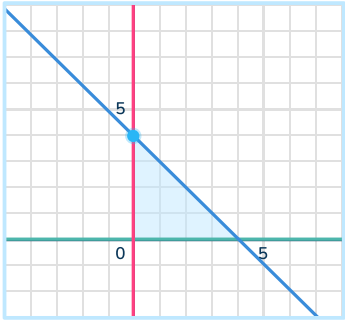
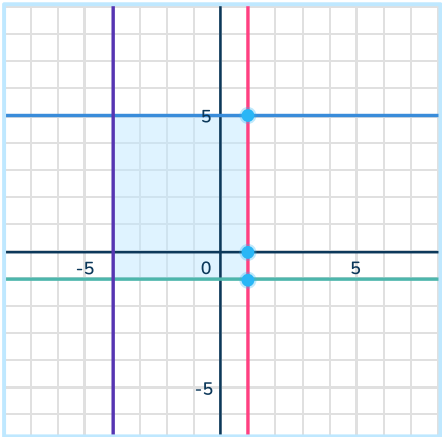
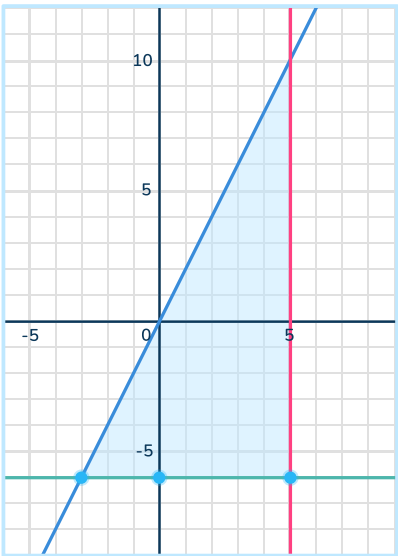
Graphing Inequalities Worksheet | Grades 9 to 12 | Answers

| Question number | Question | Answers | Standard |
|-----------------|---|--|---------------|
| 6 | Graph and shade the region bounded by the inequality, $-3 \leq x \leq 5$ |  | HS.A.REI.D.12 |
| 7 | Shade the region that is bounded by the inequality, $y < -x + 3$ |  | HS.A.REI.D.12 |
| 8 | Shade the region that is bounded by the inequality, $2y - x \geq 8$ |  | HS.A.REI.D.12 |
| 9 | Write the inequality represented in the graph below.  | $y < \frac{3}{5}x$ | HS.A.REI.D.12 |

Graphing Inequalities Worksheet | Grades 9 to 12 | Answers

| Question number | Question | Answers | Standard |
|-----------------|---|--|---------------|
| 10 | <p>Write the inequality represented in the graph below.</p>  | $y \geq -\frac{2}{5}x - 2$ | HS.A.REI.D.12 |
| 11 | <p>Julia graphed the inequality, $4 < x$ on the number line below. Explain if her graph is correct.</p>  | <p>Julia's graph is not correct. The actual inequality reads as x is greater than 4 NOT x is less than 4. (read from the variable or rewrite the inequality with the variable on the left). $x > 4$ The correct graph is:</p>  | HS.A.REI.D.12 |
| 12 | <p>Find the shaded region bounded by the inequalities, $x \geq 0$, $x \leq 4$, $y \geq 0$, and $y \leq 7$</p> |  | HS.A.REI.D.12 |

Graphing Inequalities Worksheet | Grades 9 to 12 | Answers




| Question number | Question | Answers | Standard |
|-----------------|---|--|---------------|
| 13 | Find the shaded region bounded by the inequalities, $x \geq 0$, $y \geq 0$, and $y \leq -x + 4$ |  | HS.A.REI.D.12 |
| 14 | Write the inequalities bounded by the shaded region below.  | $y \leq 5$ $y \geq -1$ $x \geq -4$ $x \leq 1$ | HS.A.REI.D.12 |
| 15 | Write the inequalities bounded by the shaded region below.  | $y \leq 2x$ $y \geq -6$ $x \leq 5$ | HS.A.REI.D.12 |

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