

Algebra 1 - Linear Inequalities in Two Variables and Systems - Test

Common Core A-REI.D.12, A-CED.A.3 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

Take this 20-point, 45-minute test to measure your skill with linear inequalities in two variables and systems (A-REI.D.12 and A-CED.A.3). Read each question carefully, show your work, and check units and signs before you move on. If you get stuck, skip the question and return to it at the end.

About this test

- Grade: Algebra 1
- Chapter: Linear Inequalities in Two Variables and Systems
- Standards: A-REI.D.12, A-CED.A.3
- Time: 45 minutes
- Total: 20 points

Question 1 - Test points [2 pts]

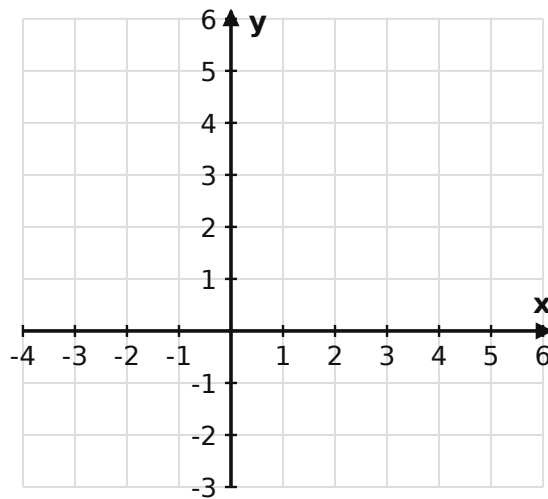
Is each point a solution of $y \leq -x + 3$?

- a. (1,1) (1 point)
- b. (3,1) (1 point)

Question 2 - Boundary and shading [2 pts]

For the inequality $y > 2x - 4$, state whether the boundary line is solid or dashed and which side of the line is shaded.

Question 3 - Graph an inequality [2 pts]



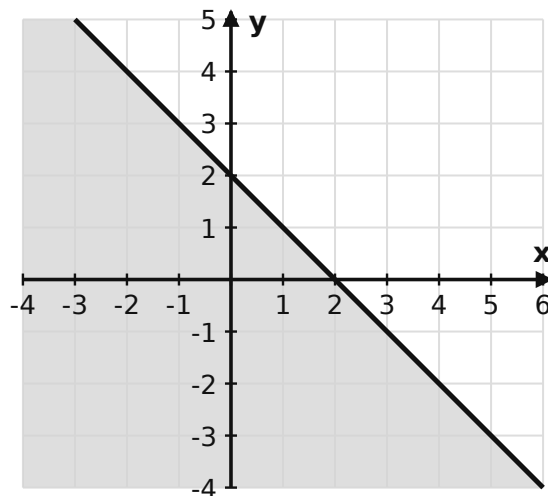
Grid for question 3.

Graph $y \geq \frac{1}{2}x + 1$ on the grid.

Question 4 - Standard form [2 pts]

Rewrite $2x - y < 4$ in slope-intercept form and describe its graph.

Question 5 - Write from a graph [2 pts]



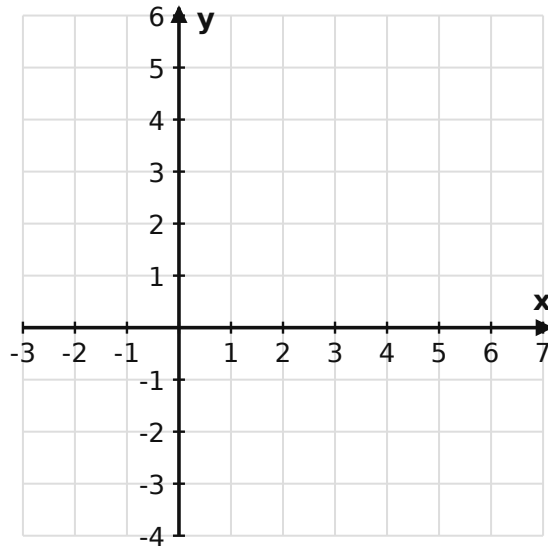
Graph for question 5.

Write the inequality graphed.

Question 6 - Check a system [2 pts]

Is $(2,3)$ a solution of the system $y > x$ and $y \leq -x + 6$? Show your work.

Question 7 - Graph a system [3 pts]



Grid for question 7.

Graph the system $y \geq x - 2$ and $y < -x + 4$. Mark the corner of the solution region.

Question 8 - Lemonade stand [3 pts]

At a lemonade stand, large cups cost \$4 (x) and small cups cost \$3 (y). The goal is at least \$80 in sales.

- Write an inequality. (1 point)
- Is selling 10 large and 15 small cups enough? (1 point)
- Is selling 8 large and 12 small cups enough? (1 point)

Question 9 - Time constraints [2 pts]

Noah spends x hours on soccer and y hours on chess each week. He spends at least 2 hours on soccer, at least 1 hour on chess, and at most 10 hours in total. Write a system of inequalities and give one possible pair (x, y) .