

54.

I Have . . . Who Has . . . ?

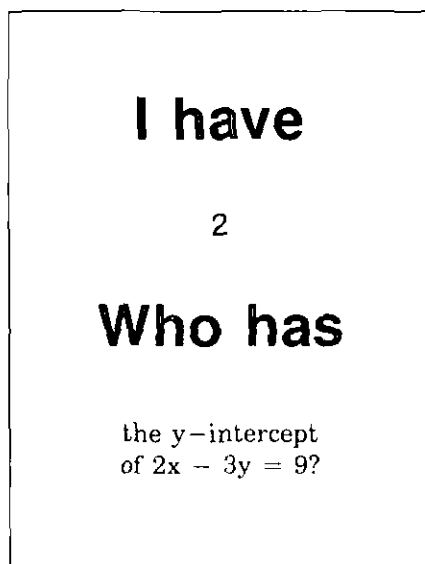
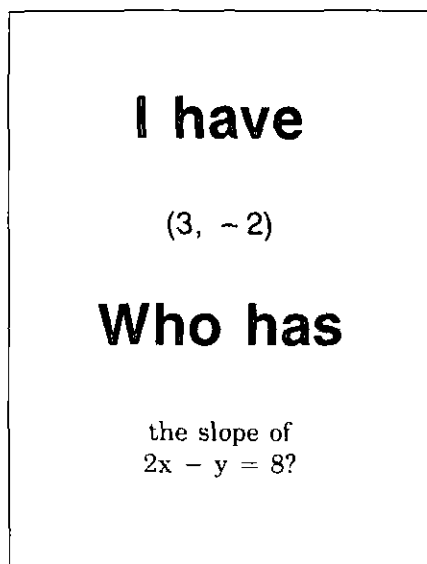
Topic: Coordinate geometry

Level: Grades 10–12

Number of
Players: Whole class

Materials: Set of “I Have . . . Who Has . . . ?” cards (1 card for each student)

- Procedure:
1. Shuffle the cards, and hand 1 to each student in the class until the deck is exhausted. Two cards can be given to some students. This will keep them in the game longer, so be selective.
 2. Choose a student to begin. Suppose the student has the first card below. The student reads, “I have $(3, -2)$,” pauses, and then reads the remainder of the card, “Who has the slope of $2x - y = 8$?”



3. The student with the second card answers, “I have 2,” pauses, and then reads the question, “Who has the y-intercept of $2x - 3y = 9$?”
4. The activity continues in this manner until all students have read their cards. If some students are not included, it is because a wrong answer was given and went unchallenged. Let the students find where the incorrect answer occurred.

<p>I have</p> $y - 4 = x - 1$ <p>Who has</p> <p>the coordinates of the point of intersection of $x = -3$ and $y = 4$?</p>	<p>I have</p> $(-3, 4)$ <p>Who has</p> <p>the equation of the line through $(1,4)$ and slope -1?</p>	<p>I have</p> $y - 4 = -1(x - 1)$ <p>Who has</p> <p>the equation of the median to \overline{AC} in $\triangle ABC$ for $A(4,3)$; $B(2,1)$ and $C(6,1)$?</p>
<p>I have</p> $y - 2 = \frac{1}{3}(x - 5)$ <p>Who has</p> <p>the intersection of the line $y = 5$ with the x-axis?</p>	<p>I have</p> <p>There is no y-intercept</p> <p>Who has</p> <p>x-intercept of the line $x = 9$?</p>	<p>I have</p> $(9,0)$ <p>Who has</p> <p>the equation of a line with no slope through the point $(4,9)$?</p>
<p>I have</p> $(3, -2)$ <p>Who has</p> <p>the slope of $2x - y = 8$?</p>	<p>I have</p> 2 <p>Who has</p> <p>the y-intercept of $2x - 3y = 9$?</p>	<p>I have</p> -3 <p>Who has</p> <p>the midpoint of $(3, 4)$ and $(9, -8)$?</p>

<p>I have</p> $\frac{3}{5}$ <p>Who has</p> <p>the equation of a line with a slope $\frac{2}{3}$ and a y-intercept of 2?</p>	<p>I have</p> $2x - 3y + -6$ <p>Who has</p> <p>the equation of a line with a slope 2 and through (0, -5)?</p>	<p>I have</p> $2x - y = 5$ <p>Who has</p> <p>the slope of a line parallel to the line $x + 3y = 8$?</p>
<p>I have</p> $-\frac{1}{3}$ <p>Who has</p> <p>the inclination of a line with slope -1?</p>	<p>I have</p> 135° <p>Who has</p> <p>the slope of a line with an inclination of 30°?</p>	<p>I have</p> $\frac{1}{3}\sqrt{3}$ <p>Who has</p> <p>the equation of a line through (2, 5) with slope $\frac{1}{3}$?</p>
<p>I have</p> $y - 5 = \frac{1}{3}(x - 2)$ <p>Who has</p> <p>the equation of a line through (2,3) and perpendicular to $2x + y = 7$?</p>	<p>I have</p> $y - 3 = \frac{1}{2}(x - 2)$ <p>Who has</p> <p>the equation of a line through (2,3) and parallel to $2x + y = 10$</p>	<p>I have</p> $y - 3 = -2(x - 2)$ <p>Who has</p> <p>the equation of the perpendicular bisector of \overline{AB} if A(2,3) and B(0,5)?</p>

<p>I have</p> $\frac{3}{2}$ <p>Who has</p> <p>the equation of the line perpendicular to the x-axis through $(-2, -4)$?</p>	<p>I have</p> $x = -2$ <p>Who has</p> <p>the slope of a line perpendicular to $4x - y = 8$?</p>	<p>I have</p> $-\frac{1}{4}$ <p>Who has</p> <p>the x-intercept of $4x - y = 8$?</p>
<p>I have</p> 2 <p>Who has</p> <p>the equation of the perpendicular bisector of \overline{AB} if $A(3,4)$ and $B(-1,2)$?</p>	<p>I have</p> $y - 3 = -2(x - 1)$ <p>Who has</p> <p>the slope of a line with an inclination of 120°?</p>	<p>I have</p> $-\sqrt{3}$ <p>Who has</p> <p>the midpoint of \overline{AB}, if $A(0,6)$ and $B(4,8)$?</p>
<p>I have</p> $(2, 7)$ <p>Who has</p> <p>the slope of $3x + 2y = 6$?</p>	<p>I have</p> $-\frac{3}{2}$ <p>Who has</p> <p>the y-intercept of $3x + 2y = 6$?</p>	<p>I have</p> 3 <p>Who has</p> <p>the slope of a line perpendicular to $5x + 3y = 8$?</p>

<p>I have</p> <p>$x = 4$</p> <p>Who has</p> <p>the slope of the altitude to \overline{BC} in $\triangle ABC$ if $A(1,6)$, $B(-2,-8)$; and $C(-7,-2)$?</p>	<p>I have</p> <p>$\frac{5}{6}$</p> <p>Who has</p> <p>the equation of a line through $(7,2)$ and perpendicular to $x + 3y = 2$?</p>	<p>I have</p> <p>$y - 2 = 3(x - 7)$</p> <p>Who has</p> <p>the equation of a line through $(2,3)$ and parallel to the x-axis?</p>
<p>I have</p> <p>$y = 3$</p> <p>Who has</p> <p>the coordinates of the vertex of the right angle in $\triangle ABC$, if $A(-5,0)$; $B(8,6)$; and $C(3,-4)$?</p>	<p>I have</p> <p>$(3, -4)$</p> <p>Who has</p> <p>the coordinates of the intersection of $x = 3$ with $x + 3y = 6$?</p>	<p>I have</p> <p>$(3, 1)$</p> <p>Who has</p> <p>the coordinates of the intersection of $2x + 3y = 8$ with the x-axis?</p>
<p>I have</p> <p>$(4, 0)$</p> <p>Who has</p> <p>the coordinates of the intersection of $x + 2y = 6$ and $x - 2y = 4$?</p>	<p>I have</p> <p>$(5, \frac{1}{2})$</p> <p>Who has</p> <p>the midpoint of \overline{AB} if $A(7,2)$ and $B(5,4)$?</p>	<p>I have</p> <p>$(6, 3)$</p> <p>Who has</p> <p>the slope of \overline{AC} if $A(3,4)$ and $C(1, 1)$?</p>