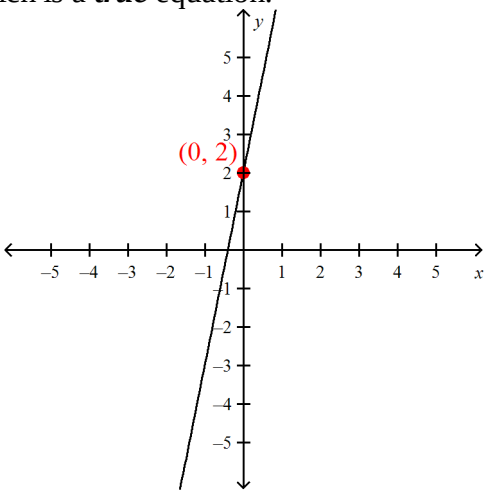
TRUE/FALSE

1. (0, 2) is a solution to $y = 5x + 2$.

ANS: T
(0, 2) ***is*** a solution to $y = 5x + 2$ because if you substitute 0 in for x and 2 in for y into $y = 5x + 2$ you get $2 = 5 \cdot 0 + 2$, i.e. $2 = 2$ which is a ***true*** equation.

Geometrically, we have:



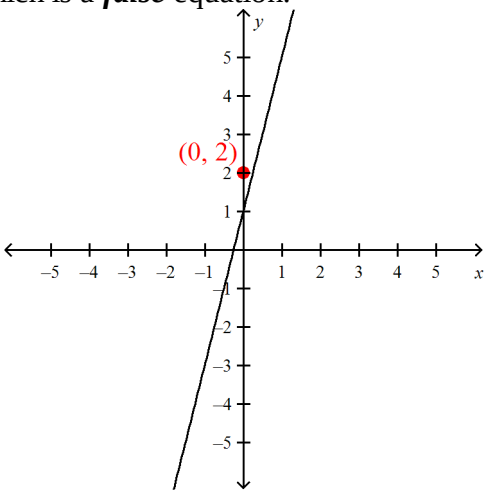
PTS: 2 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b>0, x>0, true

2. (0, 2) is a solution to $y = 4x + 1$.

ANS: F

(0, 2) is ***not*** a solution to $y = 4x + 1$ because if you substitute 0 in for x and 2 in for y into $y = 4x + 1$ you get $2 = 4 \cdot 0 + 1$, i.e. $2 = 1$ which is a ***false*** equation.

Geometrically, we have:



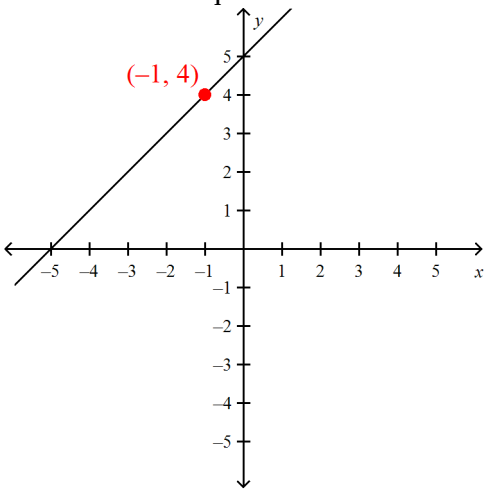
PTS: 2 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b>0, x>0, false

3. (–1, 4) is a solution to $y = x + 5$.

ANS: T

(–1, 4) ***is*** a solution to $y = x + 5$ because if you substitute -1 in for x and 4 in for y into $y = x + 5$ you get $4 = 1 \cdot (-1) + 5$, i.e. $4 = 4$ which is a ***true*** equation.

Geometrically, we have:



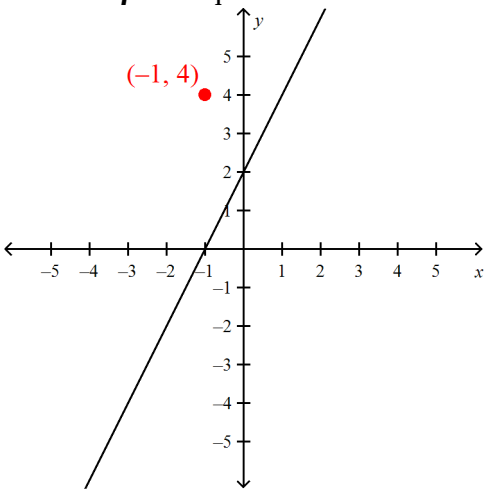
PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b>0, x<0, true

4. (–1, 4) is a solution to $y = 2x + 2$.

ANS: F

(–1, 4) is ***not*** a solution to $y = 2x + 2$ because if you substitute –1 in for x and 4 in for y into $y = 2x + 2$ you get $4 = 2 \cdot (-1) + 2$, i.e. $4 = 0$ which is a ***false*** equation.

Geometrically, we have:

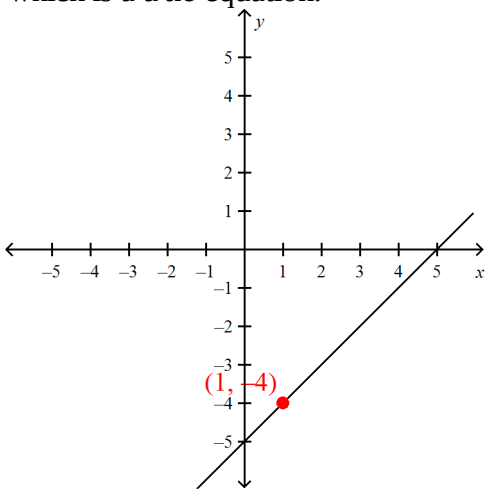


PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b>0, x<0, false

5. (1, –4) is a solution to $y = x–5$.

ANS: T
(1, –4) ***is*** a solution to $y = x–5$ because if you substitute 1 in for x and –4 in for y into $y = x–5$ you get $–4 = 1 \cdot 1 – 5$, i.e. $–4 = –4$ which is a ***true*** equation.

Geometrically, we have:



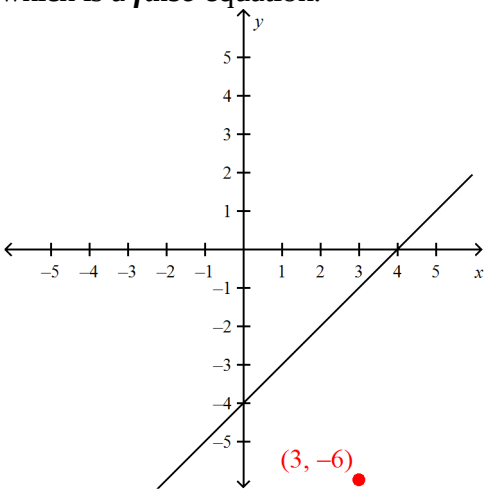
PTS: 2 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b<0, x>0, true

6. (3, –6) is a solution to $y = x–4$.

ANS: F

(3, –6) is ***not*** a solution to $y = x–4$ because if you substitute 3 in for x and –6 in for y into $y = x–4$ you get $–6 = 1 \cdot 3 – 4$, i.e. $–6 = –1$ which is a ***false*** equation.

Geometrically, we have:

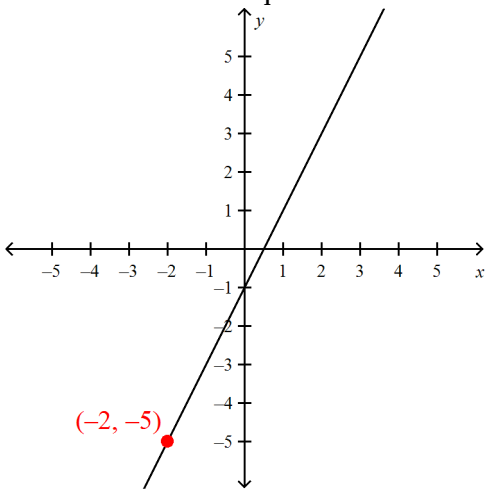


PTS: 2 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b<0, x>0, false

7. (–2, –5) is a solution to $y = 2x–1$.

ANS: T
(–2, –5) ***is*** a solution to $y = 2x–1$ because if you substitute –2 in for x and –5 in for y into $y = 2x–1$ you get $–5 = 2 \cdot (–2) – 1$, i.e. $–5 = –5$ which is a ***true*** equation.

Geometrically, we have:

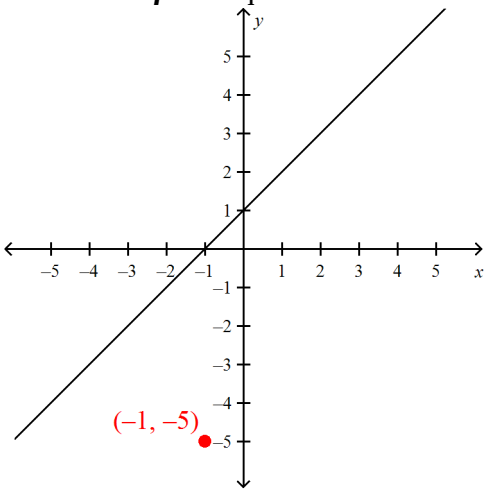


PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b<0, x<0, true

8. (–1, –5) is a solution to $y = x+1$.

ANS: F
(–1, –5) is ***not*** a solution to $y = x+1$ because if you substitute –1 in for x and –5 in for y into $y = x+1$ you get $-5 = 1 \cdot (-1) + 1$, i.e. $-5 = 0$ which is a ***false*** equation.

Geometrically, we have:

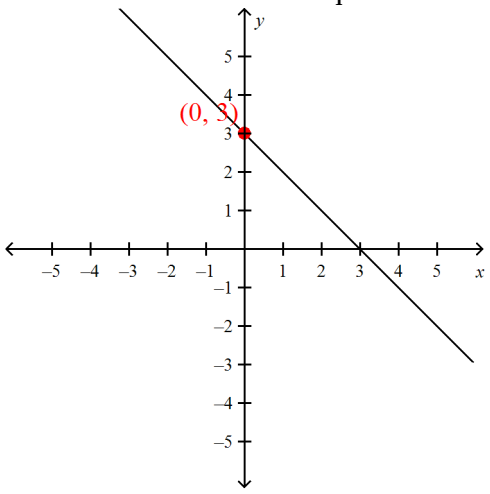


PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a>0, b<0, x<0, false

9. (0, 3) is a solution to $y = -x + 3$.

ANS: T
(0, 3) ***is*** a solution to $y = -x + 3$ because if you substitute
0 in for x and 3 in for y into $y = -x + 3$
you get $3 = (-1) \cdot 0 + 3$, i.e. $3 = 3$ which is a ***true*** equation.

Geometrically, we have:

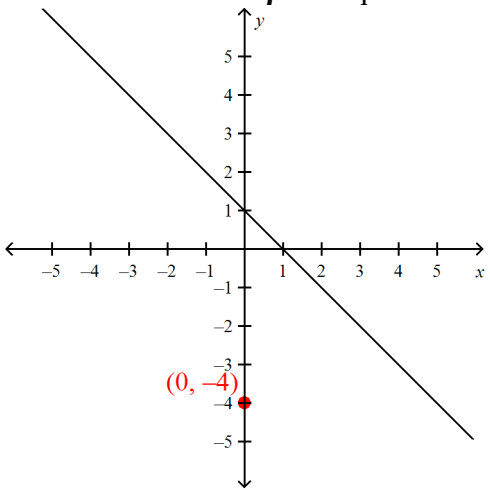


PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x>0, true

10. (0, –4) is a solution to y = –x + 1.

ANS: F
(0, –4) is ***not*** a solution to y = –x + 1 because if you substitute 0 in for x and –4 in for y into y = –x + 1
you get $-4 = (-1) \cdot 0 + 1$, i.e. $-4 = 1$ which is a ***false*** equation.

Geometrically, we have:



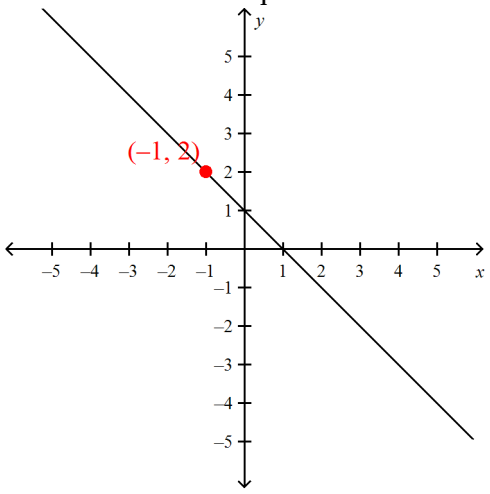
PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x>0, false

11. (–1, 2) is a solution to y = –x + 1.

ANS: T

(–1, 2) ***is*** a solution to y = –x + 1 because if you substitute –1 in for x and 2 in for y into y = –x + 1 you get $2 = (-1) \cdot (-1) + 1$, i.e. 2 = 2 which is a ***true*** equation.

Geometrically, we have:



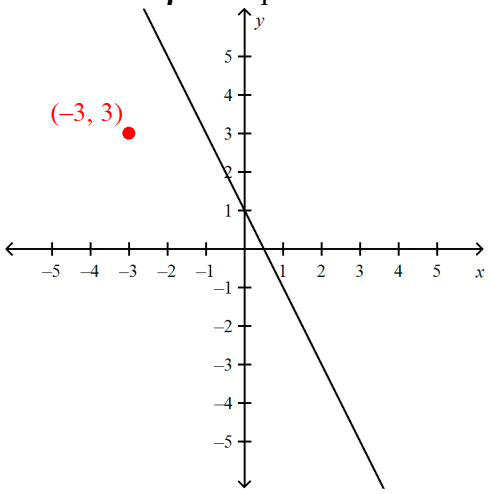
PTS: 4 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x<0, true

12. (–3, 3) is a solution to y = –2x + 1.

ANS: F

(–3, 3) is ***not*** a solution to y = –2x + 1 because if you substitute –3 in for x and 3 in for y into y = –2x + 1 you get $3 = (-2) \cdot (-3) + 1$, i.e. 3 = 7 which is a ***false*** equation.

Geometrically, we have:

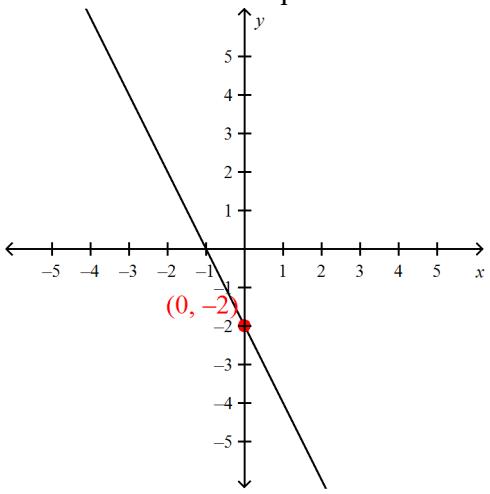


PTS: 4 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x<0, false

13. (0, –2) is a solution to y = –2x–2.

ANS: T
(0, –2) ***is*** a solution to y = –2x–2 because if you substitute 0 in for x and –2 in for y into y = –2x–2 you get –2 = (–2) · 0 – 2, i.e. –2 = –2 which is a ***true*** equation.

Geometrically, we have:

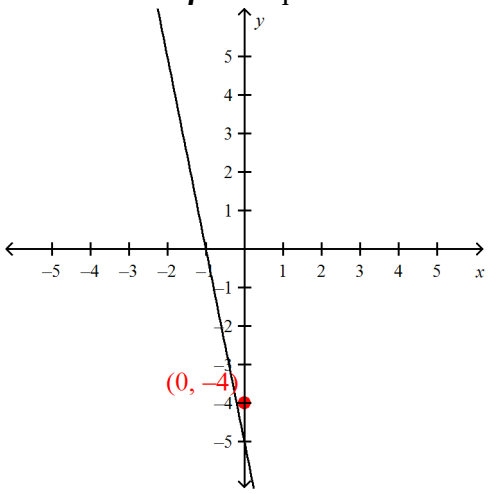


PTS: 2 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x>0, true

14. (0, –4) is a solution to y = –5x–5.

ANS: F
(0, –4) is ***not*** a solution to y = –5x–5 because if you substitute 0 in for x and –4 in for y into y = –5x–5you get
$-4 = (-5) \cdot 0 - 5$, i.e. $-4 = -5$ which is a ***false*** equation.

Geometrically, we have:

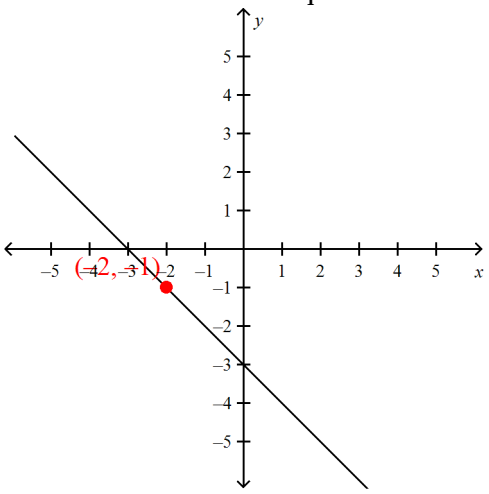


PTS: 2 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x>0,false

15. (–2, –1) is a solution to y = –*x*–3.

ANS: T
(–2, –1) ***is*** a solution to y = –*x*–3 because if you substitute
–2 in for *x* and –1 in for *y* into y = –*x*–3 you get
–1 = (–1) · (–2) – 3, i.e. –1 = –1 which is a ***true*** equation.

Geometrically, we have:

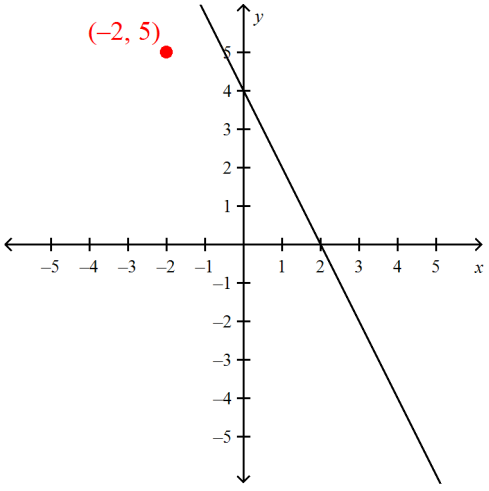


PTS: 3 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x<0, true

16. (–2, 5) is a solution to y = –2x+4.

ANS: F
(–2, 5) is ***not*** a solution to y = –2x+4 because if you substitute
–2 in for x and 5 in for y into y = –2x+4 you get
5 = (–2) · (–2) + 4, i.e. 5 = 8 which is a ***false*** equation.

Geometrically, we have:



PTS: 4 DIF: Grade 8 REF: 1AL2.3
OBJ: Students verify that a point lies on a line, given an equation of the line.
TOP: Algebra 1 KEY: linear equations | testing points MSC: Dynamic
NOT: a<0, b<0, x<0, false