

1. The height h , in feet, of a sky diver t seconds after she jumps from an airplane 1,648 feet above the ground is given by the formula $h = -16t^2 + 1,648$. If a parachute opens 4.5 seconds after a sky diver leaves the airplane, **about** how far will she be from the ground when the parachute opens?
- A 172 ft
B 1,144 ft
C 1,324 ft
D 1,972 ft
2. Some business people took a flight from Greenville to Hickory, a distance of approximately 300 miles. The plane's rate of speed was 225 mph. How long did the flight take?
- A 45 min
B 1 hr
C 1 hr 20 min
D 1 hr 30 min
3. Trent is using the linear equation $x + y = 2$ to plot a line on graph paper. If $(x, -4)$ are the coordinates of a point on the line, what is the value of x ?
- A -4
B -3
C 5
D 6
4. What is the solution to the following inequality?
- $$-3w + 3 \geq 18$$
- A $w \geq -7$
B $w \leq -7$
C $w \geq -5$
D $w \leq -5$
5. What is the value of x in the following equation?
- $$\frac{2.5}{x} = 0.04$$
- A 100
B 62.5
C 0.10
D 0.016

6. Solve: $\frac{x}{3} + 5 = 2$

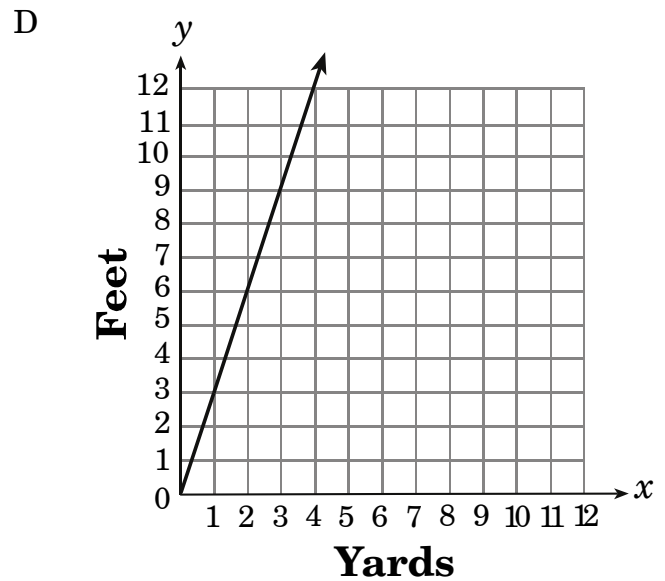
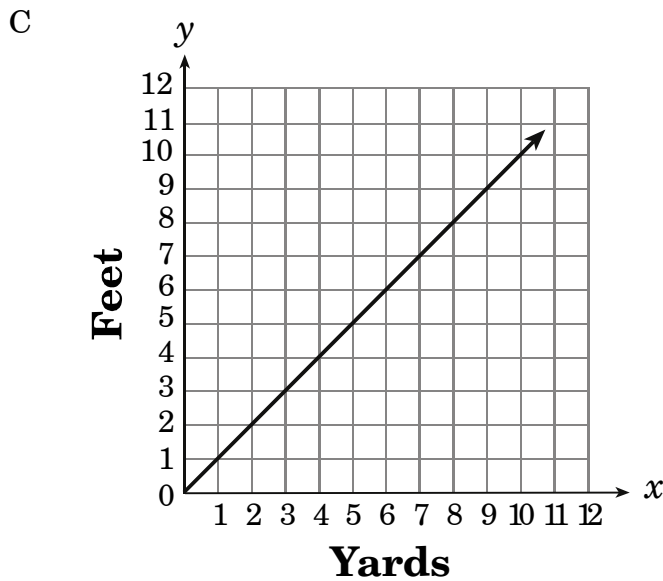
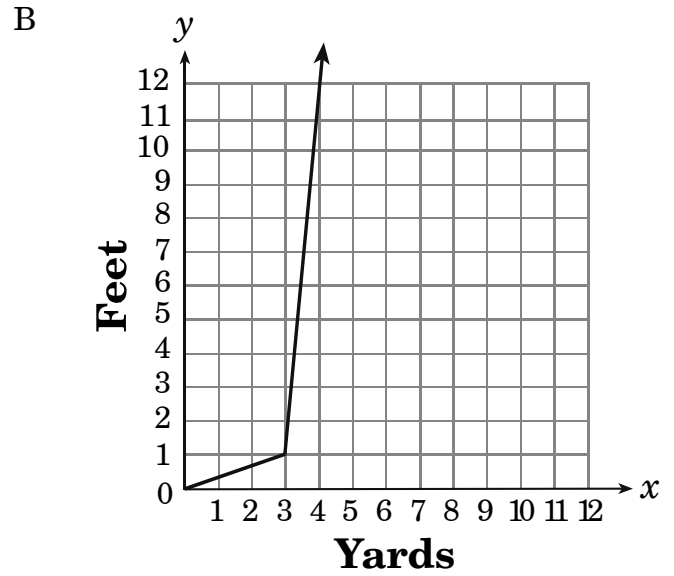
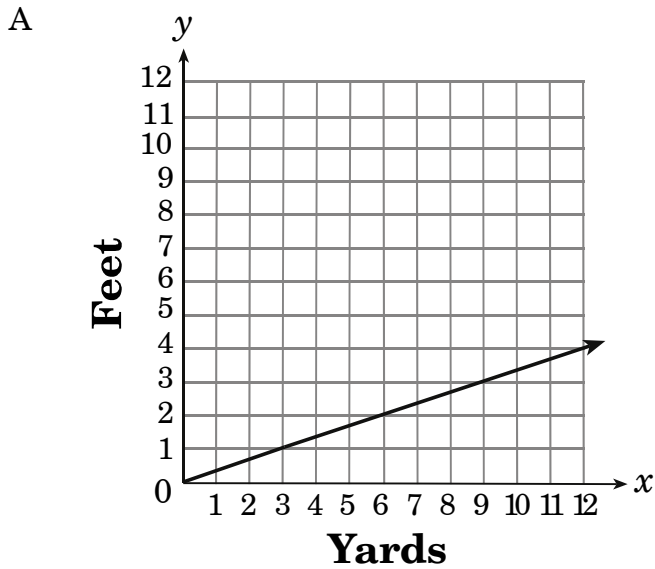
A $x = -9$

B $x = -1$

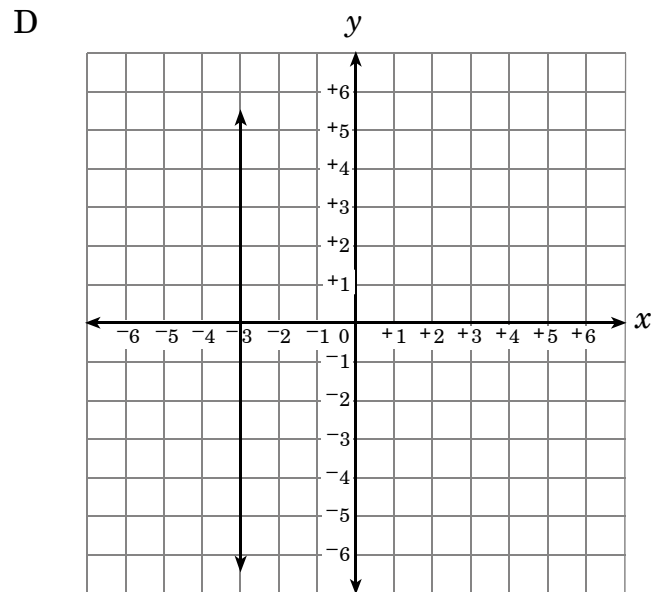
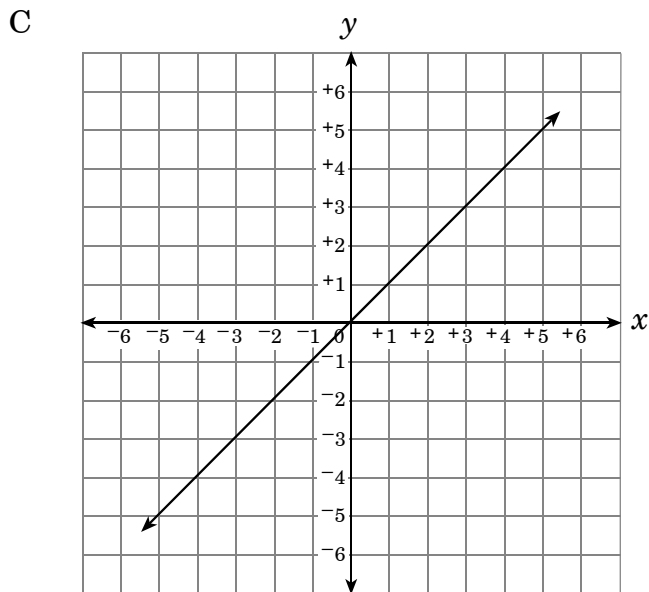
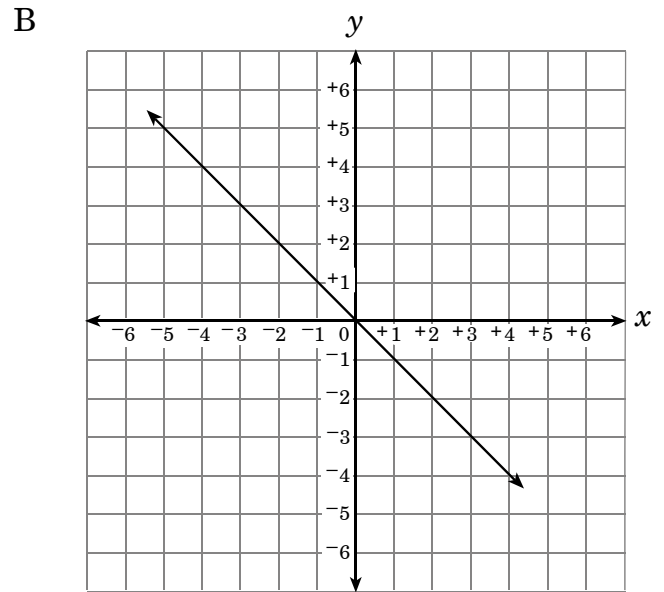
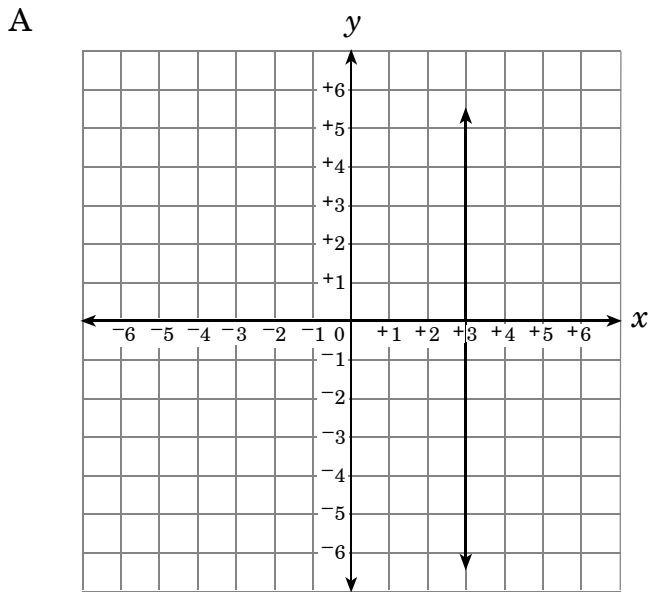
C $x = 1$

D $x = 9$

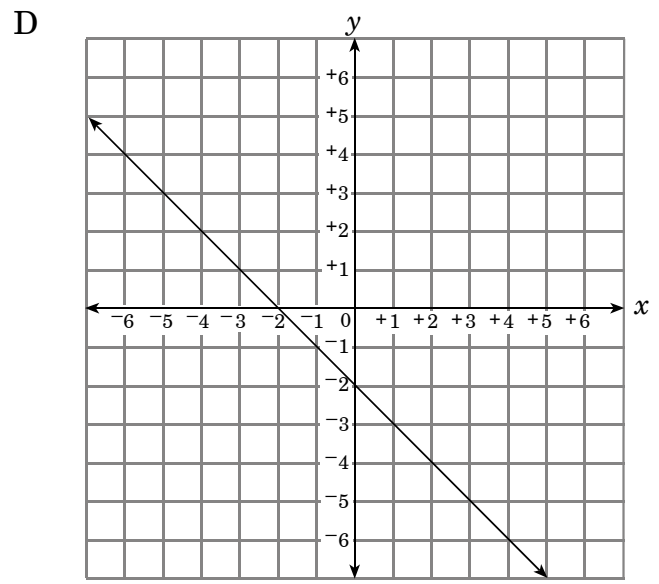
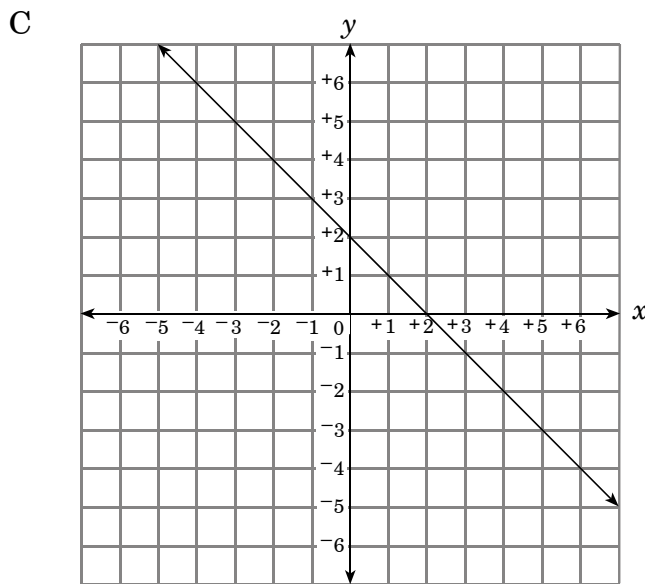
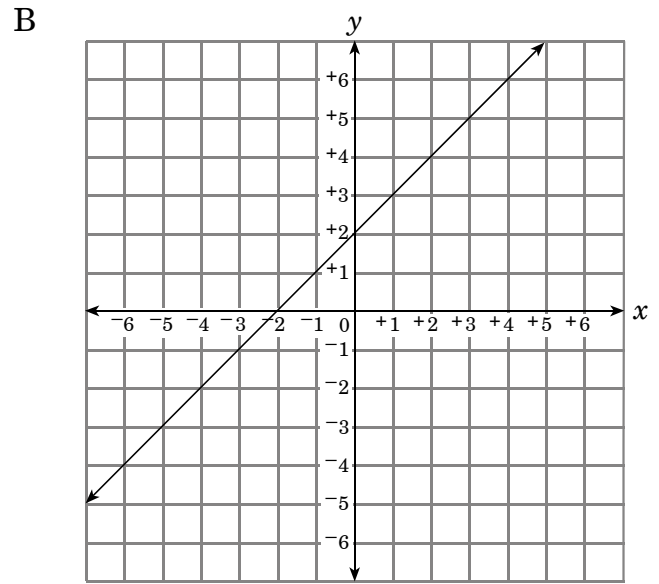
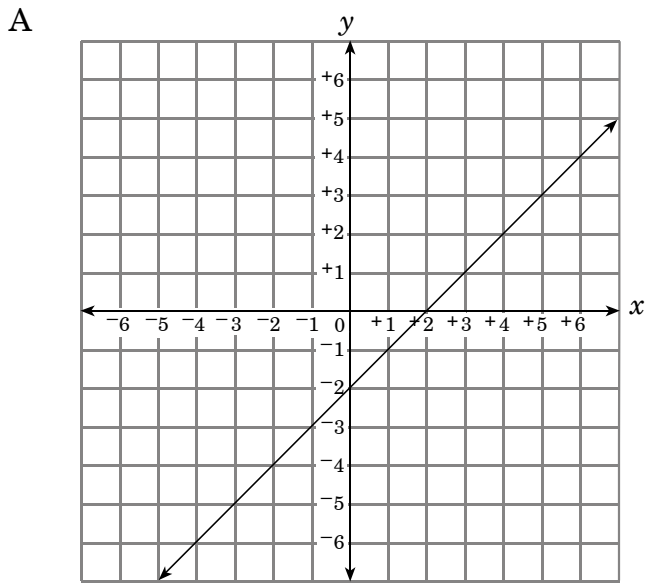
7. In the equation $y = 3x$, x represents yards and y represents feet. Which is the graph of this equation?



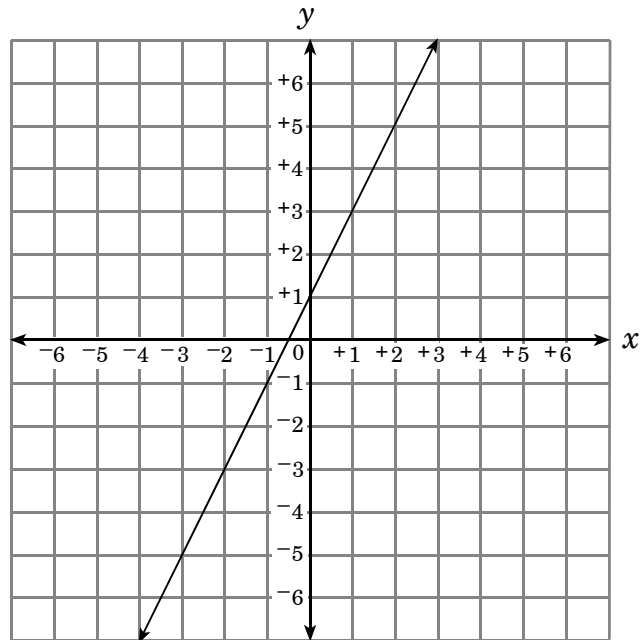
8. Which is the graph of $x = y$?



9. Which of the following is the graph of the equation $y = x - 2$?

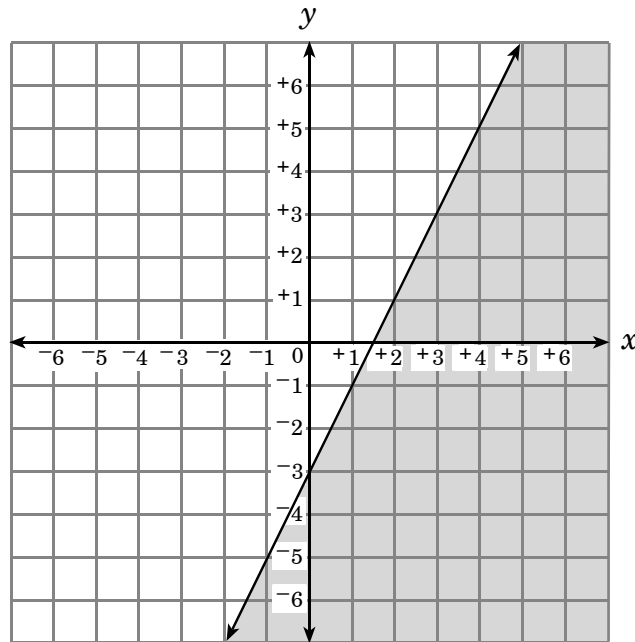


10. Which equation describes the line graphed below?



- A $x - y = 0$
- B $x - y = -1$
- C $2x - y = -1$
- D $x + 2y = -3$

11. The graph of $y \leq 2x - 3$ is shown.



Which set of points satisfies the inequality?

- A $\{(3, 3), (-4, -11), (-1, -8), (5, 0)\}$
- B $\{(5, 7), (-3, -10), (5, -7), (-1, -4)\}$
- C $\{(-1, -10), (5, 8), (-4, -13), (3, -2)\}$
- D $\{(-4, -12), (-1, -5), (3, 4), (5, 6)\}$

12. The x -intercept of a line is the point on the graph where $y = 0$. What is the x -intercept for the graph of $4x + 3y = 12$?
- A (4, 0)
 - B (3, 0)
 - C (-3, 0)
 - D (-4, 0)

End of Goal 3 Sample Items

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Answers to EOG Mathematics Grade 8 Sample Items

Goal 3

- 1. Objective 3.01**
Use formulas in problem-solving situations.
Thinking Skill: Applying **Correct Answer:** C
- 2. Objective 3.01**
Use formulas in problem-solving situations.
Thinking Skill: Integrating **Correct Answer:** C
- 3. Objective 3.02**
Solve one and two-step linear equations and inequalities.
Thinking Skill: Applying **Correct Answer:** D
- 4. Objective 3.02**
Solve one and two-step linear equations and inequalities.
Thinking Skill: Applying **Correct Answer:** D
- 5. Objective 3.02**
Solve one and two-step linear equations and inequalities.
Thinking Skill: Applying **Correct Answer:** B
- 6. Objective 3.02**
Solve one and two-step linear equations and inequalities.
Thinking Skill: Applying **Correct Answer:** A
- 7. Objective 3.03**
Graph a linear equation using ordered pairs. Investigate the graphs of linear inequalities; use appropriate technology.
Thinking Skill: Analyzing **Correct Answer:** D
- 8. Objective 3.03**
Graph a linear equation using ordered pairs. Investigate the graphs of linear inequalities; use appropriate technology.
Thinking Skill: Analyzing **Correct Answer:** C
- 9. Objective 3.03**
Graph a linear equation using ordered pairs. Investigate the graphs of linear inequalities; use appropriate technology.
Thinking Skill: Analyzing **Correct Answer:** A
- 10. Objective 3.03**
Graph a linear equation using ordered pairs. Investigate the graphs of linear inequalities; use appropriate technology.
Thinking Skill: Analyzing **Correct Answer:** C

Answers to EOG Mathematics Grade 8 Sample Items

Goal 3

11. Objective 3.03

Graph a linear equation using ordered pairs. Investigate the graphs of linear inequalities; use appropriate technology.

Thinking Skill: Analyzing

Correct Answer: A

12. Objective 3.03

Graph a linear equation using ordered pairs. Investigate the graphs of linear inequalities; use appropriate technology.

Thinking Skill: Analyzing

Correct Answer: B