

Name:

Date: Score:

Slope-Intercept Form Word Problems

- 1 John collects aluminum cans to recycle. He collected 100 pounds of aluminum cans. He later plans to collect an additional 25 pounds each week.
 - (a) Write a linear equation in slope-intercept form to represent the total weight of cans that he collects over a period of time.
 - (b) In how many weeks will John have a total of 400 pounds of cans.

- 2 Kris is tracking the growth of his plant. Today the plant has a height of 5 cm. The plant grows 1.5 cm per day.
 - (a) Write an equation that represents the plant's height after a certain number of days.
 - (b) How tall will the plant grow after 9 days?

- 3 A plane loses its altitude at the rate of 5 meters per second. It reaches a maximum altitude of 7500 meters.
 - (a) Write an equation that represents the altitude of the plane after a certain amount of time.
 - (b) Find the time that the plane will take to meet the ground.

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Answers

Slope-Intercept Form Word Problems

- 1 John collects aluminum cans to recycle. He collected 100 pounds of aluminum cans. He later plans to collect an additional 25 pounds each week.
- (a) Write a linear equation in slope-intercept form to represent the total weight of cans that he collects over a period of time.
 - (b) In how many weeks will John have a total of 400 pounds of cans.
- (a) $y = 25x + 100$, where $x =$ number of weeks.
 $y =$ pounds of aluminum cans.
- (b) 12 weeks.
- 2 Kris is tracking the growth of his plant. Today the plant has a height of 5 cm. The plant grows 1.5 cm per day.
- (a) Write an equation that represents the plant's height after a certain number of days.
 - (b) How tall will the plant grow after 9 days?
- (a) $y = 1.5x + 5$, where $y =$ plant height
 $x =$ number days
- (b) 18.5 cm
- 3 A plane loses its altitude at the rate of 5 meters per second. It reaches a maximum altitude of 7500 meters.
- (a) Write an equation that represents the altitude of the plane after a certain amount of time.
 - (b) Find the time that the plane will take to meet the ground.
- (a) $y = -5x + 7500$
- (b) 1,500 seconds