

Puzzle Time

How Do Kangaroos Travel Across The Ocean?

Write the letter of each answer in the box containing the exercise number.

Write the linear equation in slope-intercept form.

1.
$$3x + y = 8$$

2.
$$9x - y = \frac{1}{3}$$

3.
$$-\frac{1}{4}x + y = 3$$

4.
$$2x - 7y = 12$$

Find the x- and y-intercepts of the linear equation.

5.
$$-3x + 5y = 15$$

6.
$$2x - y = 4$$

7.
$$4x - 9y = 36$$

8.
$$x + \frac{1}{3}y = -3$$

9.
$$\frac{2}{5}x - \frac{3}{4}y = 12$$

10.
$$7.6x + 15.2y = 38$$

- 11. The booster club sells popcorn at basketball games for \$0.75 per bag. Their cost for supplies is \$12. The equation -0.75x + y = -12 represents the booster club's income y after selling x bags of popcorn. Find the x- and y-intercepts of the linear equation.
- **12.** You upload digital photos to an online photo processing website. You can print 4-inch-by-6-inch photos for \$0.30 each and 5-inch-by-7-inch photos for \$0.75 each. The linear equation 0.30x + 0.75y = 15 represents the ways you can print x 4-inch-by-6-inch photos and y 5-inch-by-7-inch photos for \$15. Find the x- and y-intercepts of the linear equation.

Answers

H.
$$y = \frac{2}{7}x - \frac{12}{7}$$

- **S.** *x*-intercept: 5; *y*-intercept: 2.5
- **H.** x-intercept: -3; y-intercept: -9
- J. x-intercept: 50; y-intercept: 20
- **M.** x-intercept: 2; y-intercept: -4
- **Y.** *x*-intercept: 30; *y*-intercept: -16
- **U.** *x*-intercept: 9; *y*-intercept: -4
- P. x-intercept: 16; y-intercept: -12
- **T.** y = -3x + 8.
- **E.** *x*-intercept: -5; *y*-intercept: 3
- **P.** $y = 9x \frac{1}{3}$
- 1. $y = \frac{1}{4}x + 3$