

## COLLEGE ALGEBRA QUIZ

- (1) What is the equation of the line in slope intercept form, given  $m = \frac{-2}{5}$  and the y-intercept is  $(0, 8)$ .

**Solution:**

$$y = -\frac{2}{5}x + 8$$

- (2) What is the equation of the line in slope intercept form, given two points on the line,  $(-3, 8)$  and  $(-1, -6)$ ?

**Solution:**

$$y = -7x - 13$$

- (3) Given the equation of two lines,  $y = \frac{2}{3}x - 5$  and  $y = \frac{-2}{3}x + 5$ , determine whether their graphs are parallel, perpendicular, or neither.

**Solution:**

neither

- (4) Given the equation of two lines,  $x + 2y = 4$  and  $2x + 4y = 7$ , determine whether their graphs are parallel or perpendicular, or neither.

**Solution:**

parallel

- (5) The following table provides data on the number of nuclear energy generating units which have permission to operate. Model the data with a linear function and predict the number of operable units in the year 1995. Since answers may vary depending on the data points used, use the first and the last data point for this question.

TABLE 1. Operable nuclear energy generating units

year, x	number of units
1957, 0	1
1960, 3	3
1965, 8	13
1970, 13	20
1975, 18	57
1980, 23	71
1985, 28	96
1990, 33	112

**Solution:**

$$f(x) = 3.36x + 1$$