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$$R = \frac{F}{N+F}$$

A website uses the formula above to calculate a seller's rating, R , based on the number of favorable reviews, F , and unfavorable reviews, N . Which of the following expresses the number of favorable reviews in terms of the other variables?

A) $F = \frac{RN}{R-1}$

B) $F = \frac{RN}{1-R}$

C) $F = \frac{N}{1-R}$

D) $F = \frac{N}{R-1}$

$$\frac{F(1-R)}{1-R} = \frac{RN}{1-R}$$

$$\begin{array}{r} F = RN + RF \\ -RF \quad -RF \\ \hline F - RF = RN \end{array} \quad F = \frac{RN}{1-R}$$

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

Solve for x .

$$2x = 5y + xy$$

$$-xy \quad -xy$$

$$2x - xy = 5y$$

$$\frac{x(2-y)}{2-y} = \frac{5y}{2-y}$$

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

$$A = \frac{2-B}{3B+5C} \quad \text{Find } B.$$

$$\cancel{2} - \cancel{B} = \cancel{3AB} + 5AC$$

$$\cancel{-2} - \cancel{3AB} - \cancel{3AB} - 2$$

$$-B - 3AB = 5AC - 2$$

$$\cancel{B(-1-3A)} = \frac{5AC-2}{-1-3A}$$

$$B = \frac{5AC-2}{-1-3A}$$

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What is the sum of all values of m that satisfy

$$2m^2 - 16m + 8 = 0 ?$$

A) -8

B) $-4\sqrt{3}$

C) $4\sqrt{3}$

D) 8

$$s = \frac{-(-16)}{2}$$

$$= \frac{16}{2}$$

$$ax^2 + bx + c = 0$$

$$\text{sum of roots} = -\frac{b}{a}$$

$$\text{prod of roots} = \frac{c}{a}$$

$$3x^2 + 7x = 5 \quad 3x^2 + 7x - 5 = 0$$

Find sum and prod
of roots.

$$S = \frac{-b}{a} = \frac{-7}{3} \quad P = \frac{c}{a} = \frac{-5}{3}$$

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A radioactive substance decays at an annual rate of 13 percent. If the initial amount of the substance is 325 grams, which of the following functions f models the remaining amount of the substance, in grams, t years later?

- (A) $f(t) = 325(0.87)^t$
 B) $f(t) = 325(0.13)^t$
 C) $f(t) = 0.87(325)^t$
 D) $f(t) = 0.13(325)^t$

$$A = P(1+r)^t \\ = 325(1-.13)^t$$

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The expression $\frac{5x-2}{x+3}$ is equivalent to which of the following?

A) $\frac{5-2}{3}$

B) $5 - \frac{2}{3}$

C) $5 - \frac{2}{x+3}$

D) $5 - \frac{17}{x+3}$

$$\begin{array}{r} -3 \overline{) 5 \quad -2} \\ \underline{ 15} \\ 5 \quad -17 \end{array}$$

$$5 - \frac{17}{x+3}$$

Express $\frac{2x-5}{x+2}$ in $Q(x) + \frac{r}{x+2}$

$$\begin{array}{r} -2 \overline{) 2 \quad -5} \\ \underline{ 4} \\ 2 \quad -9 \end{array} \rightarrow 2 - \frac{9}{x+2}$$