

Activity 18 Assessment

Determining Unknown Values in Proportional Situations

Determining Unknown Values in Proportional Situations

Understands and describes a proportional situation

"In a proportional situation, the two variables change at the same rate. They have the same ratio. For example, if 1 pineapple costs \$5, then 2 pineapples cost \$10."

Uses a ratio table to determine an unknown value

In a lake, the ratio of yellow perch to northern pike caught is approximately 8:3. 150 northern pike were caught. About how many yellow perch were caught?

YP	NP
8	3
80	30
800	300
400	150

"About 400 yellow perch were caught."

Uses a scale factor to determine an unknown value

In a lake, the ratio of yellow perch to northern pike caught is approximately 8:3. 150 northern pike were caught. About how many yellow perch were caught?

"The scale factor is:

$$\frac{YP}{NP} = \frac{8}{3}$$

So, the number of yellow perch caught is:

$$\frac{8}{3} \times 150 = 400$$

About 400 yellow perch were caught."

Uses a proportion to determine an unknown value

In a lake, the ratio of yellow perch to northern pike caught is approximately 8:3. 150 northern pike were caught. About how many yellow perch were caught?

"Let y represent the number of yellow perch caught.

$$\begin{array}{c} \times 50 \\ \frac{y}{150} = \frac{8}{3} \\ \times 50 \\ y = 8 \times 50 \\ y = 400 \end{array}$$

About 400 yellow perch were caught."

Observations/Documentation