

Proportion Worksheets (Equations)

1. Each school year, the seventh graders who study Life Science participate in a special field trip to the city zoo. In 2010, the school paid \$1,260 for 84 students to enter the zoo. In 2011, the school paid \$1,050 for 70 students to enter the zoo. In 2012, the school paid \$1,395 for 93 students to enter the zoo.

a) Is the price the school pays each year in entrance fees proportional to the number of students entering the zoo?

b) Explain why or why not.

c) Identify the constant of proportionality and explain what it means in the context of this situation.

d) What would the school pay if 120 students entered the zoo?


e) How many students would enter the zoo if the school paid \$1,425?

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a) Is the price the school pays each year in entrance fees proportional to the number of students entering the zoo?

<i>Number of Students</i>	<i>Price (\$)</i>	
84	1,260	$\frac{1260}{84} = 15$
70	1,050	$\frac{1050}{70} = 15$
93	1,395	$\frac{1395}{93} = 15$



b) Explain why or why not.

The price is proportional to the number of students because the ratio of the entrance fee paid per student was the same.

$$\frac{1260}{84} = 15$$

c) Identify the constant of proportionality and explain what it means in the context of this situation.

The constant of proportionality (k) is 15. This represents the price per student.

d) What would the school pay if 120 students entered the zoo?

$$120 \text{ students } (\$15 \text{ per student}) = \$1800$$

e) How many students would enter the zoo if the school paid \$1,425?

$$\frac{1425}{15} = 95 \text{ students}$$

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