

Direct Variation vs. Partial Variation

Deepti, Krissnavee and Abiramy are planning to hold a huge AP math party at a banquet hall. To keep the cost as low as possible, they compare the cost of two banquet halls.

Hall Vyshna: Charges \$50 per person.

Hall Uday: Charges a base fee of \$2000 plus \$30 per person

a) The dependent variable is _____ and the independent variable is _____

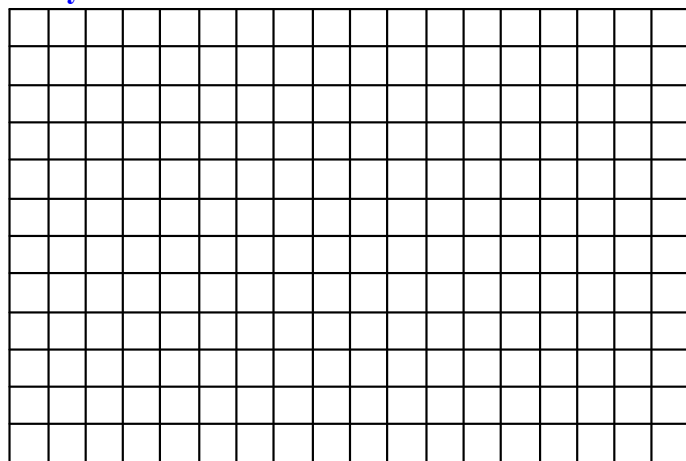
b) For both situations complete a table showing the cost for 0, 20, 40, and so on up to 100 people.

Hall Vyshna

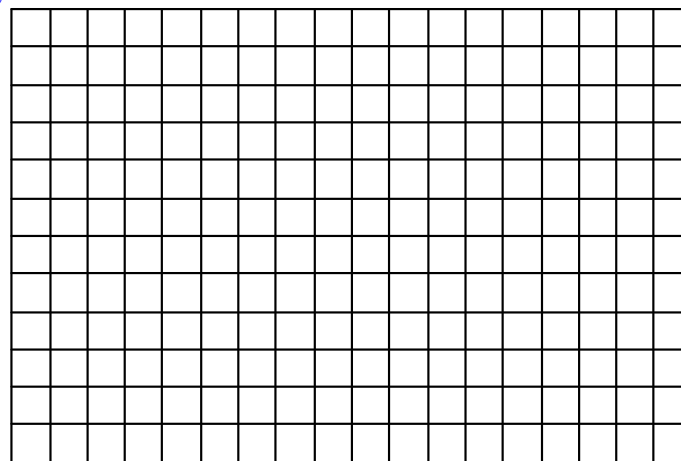
Hall Uday

c) Graph the relationships

Hall Vyshna



Hall Uday



d) For each banquet hall, write an equation that relates the cost, C , in \$, for n people attending

Hall Vyshna

Hall Uday

e) Use the equations to complete the following:

110 people attending

Hall Vyshna

Hall Uday

220 people attending

Hall Vyshna

Hall Uday

330 people attending

Hall Vyshna

Hall Uday

f) What happened to the cost when the number of people was doubled? What happened when the number of people tripled?

Hall Vyshna

Hall Uday

g) Study the two graphs carefully.

- What is the same?

- What is different?