# Kwantlen Polytechnic University Mathematics Problem of the Week 

Problem number 262
Posted Monday September $28^{\text {th }} 2015$
Submit by noon, Monday October $5^{\text {th }} 2015$


A party of three hikers arrived at a hilltop village at the end of a strenuous journey after dark. They were received by two warm hospitable hosts $\mathbf{X}$ and $\mathbf{Y}$. Upon discovering that the hikers were hungry, the two hosts decided to share their food with them. $\mathbf{X}$ brought 3 pizzas and $\mathbf{Y}$ brought 5 pizzas. Each pizza was of the same size and each pizza was divided into five equal slices. Each of these five people ate the same number of slices. In the morning the hikers decided to continue with their expedition but, before, leaving each hiker handed $\$ 80.00$ to $\mathbf{Y}$. Since $\mathbf{Y}$ had brought five pizzas, he decided to keep five-eighths of the total amount for himself and gave the remaining amount to $\mathbf{X}$. However $\mathbf{X}$ did not agree with $\mathbf{Y}$ 's decision, as he felt that each person should receive the same amount. After an argument, $\mathbf{X}$ and $\mathbf{Y}$ decided to approach the village tribunal for justice. The judge of the tribunal advised $\mathbf{X}$ to accept the amount given to him by $\mathbf{Y}$, but $\mathbf{X}$ was quite adamant and he wanted the issue to be solved by the tribunal. Eventually, the tribunal had to decide how to divide the money fairly between $\mathbf{X}$ and $\mathbf{Y}$. The judges explained to $\mathbf{X}$ and $\mathbf{Y}$ how they reached their decision. After hearing their explanation, $\mathbf{X}$ realized that he should have accepted the amount which was offered to him earlier (as now he received a lesser amount). How much money $\operatorname{did} \mathbf{X}$ receive after the tribunal decision?

## Submit your solution by

- emailing it to MathProblem@kpu.ca
- putting it in the MPOW box in the Math Assistance Centre on the Surrey campus (library, main floor)
- putting it in the MPOW box in the Learning Centre on the Richmond campus (located in the library)
- giving it to Lin Hammill (Surrey Fir 348) or Judy Bicep (Richmond 3335)

Be sure to include your name. In order to be eligible for the prize, KPU students should also include their student numbers. Winners names will be posted on the Problem of the Week web page. You can have the Problem of the Week emailed to you each week. Just go to the website and sign up.

Web site: http://www.kpu.ca/mathematics-problem-week .

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