**Project Management and Research Methodology**

**Risk management tutorial**

Q1.

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| **RISK** | **PROBABILTY** | **IMPACT** |
| Database security breach | 0.03 | £70,000 |
| Web site crashes | 0.04 | £2,200 |
| Software delayed by 1 week | 0.25 | £3,500 |

1. Calculate the risk exposure for each of these 3 risks.
2. Increasing database security will reduce the probability of a security breach to 0.005. The software/hardware required to achieve this costs £200. What is the new risk exposure? Would you recommend undertaking this risk reduction action? – give a reason for your answer.
3. Installing a higher spec server will reduce the probability of a web site crash to 0.03. The higher spec server costs £5,000. Would you recommend this risk reduction action? – give a reason for your answer.
4. Hiring an extra software developer for the duration of the project will reduce the risk of software being delayed to 0.03. This software developer will cost £1,000. Would you recommend this risk reduction action? – give a reason for your answer.

Q2.

Mikki, a teacher, is planning a skiing holiday for her class. As part of the planning process, she has identified possible risks to the holiday and attempted to put a measure on their probability of occurring and subsequent impact. Construct a probability impact grid from the qualitative risk data given below:

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| --- | --- | --- | --- |
| **ID** | **Risk description** | **Probability** | **Impact** |
| 1 | Student falls ill or is injured and must remain in hotel for 1 or more days | Medium | Medium |
| 2 | Student falls ill or is injured and must return home | Low | High |
| 3 | Weather is very poor and holiday cancelled before departure | Very Low | Very High |
| 4 | Weather is poor while there and means no skiing for 1 or more days | Medium | Medium |
| 5 | Luggage is damaged, delayed or lost | Low | Medium |
| 6 | Student drops out of trip prior to departure | Medium | High |
| 7 | Travel documents misplaced or lost while there | Low | Low |
| 8 | Travel documents misplaced or lost on route | Very Low | High |
| 9 | Bus breaks down meaning ferry is missed | Very Low | High |

Q3.

Read each of these **Expedition** scenarios and identify which risk action (accept, prevent, reduce, transfer, contingency) is being used:

1. Stormy weather is predicted and this could lead to slippery conditions so Tony orders slip resistant footwear for all team members
2. Tony buys a surge protector to ensure a lighting strike doesn’t blow out all electrical equipment
3. Flooding is a possibility, and this could cause serious damage serious damage to equipment. Tony buys an insurance policy that covers flood damage
4. A manufacturer issues a warning that the safety equipment that is to be used has a small but nonzero probability of failure under the conditions that the team will be facing. Tony replaces it with more appropriate equipment
5. A mud slide would be very damaging to the expedition, but there’s nothing Tony can do about it
6. A team member finds out that one of the routes to be taken passes through a region that is considering regulations that could be expensive to comply with. Tony works with a surveying team to find a new route.
7. The expedition will pass through terrain that could interfere with communications equipment. Tony buys a flare gun and rescue beacon just in case there is a communications failure.