Quiz Questions

(To be entered into your LMS)

1. What ***usually*** happens to a healthy cell if it accumulates a mutation? Choose all that apply.
    a. It will not undergo cell division until the mutation is repaired ✔
    b. It may be tagged for apoptosis by the immune system ✔
    c. It will try to repair the mutation ✔
    d. It will become cancerous

2. What are the characteristics of healthy cells? Choose all that apply.
    a. Contact inhibition ✔
    b. Anaplasia
    c. Metastasis
    d. Cell cycle checkpoints ✔

3. What are the characteristics of a benign tumor?
    a. It could become malignant if it accumulates more mutations
    b. It has one or more mutations causing it to be abnormal ✔
    c. It has begun to spread throughout the body
    d. It is anaplastic

4. About what proportion of cancer cases happen because of genes we inherited from our parents?
    a. 5-10% ✔
    b. 25%
    c. 50%
    d. 90-95%

5. What statistic tells us if we've found a likely significant peak on a QTL map?
    a. A p-value greater than 0.50
    b. A LOD score greater than 3 ✔
    c. A p-value less than 0.50
    d. A LOD score less than 2

6. How does QTL mapping usually differ from GWAS? Choose all that apply.
    a. QTL is usually applied to the entire genome
    b. QTL is usually applied to part of the genome ✔
    c. QTL is usually applied to polygenic traits ✔
    d. QTL is usually applied to discrete traits

7. Short answer: would a mutation in any gene cause cancer? Explain why or why not.
   Only mutations in proto-oncogenes would be expected to cause cancer. These are the genes that regulate the cell cycle, DNA repair, apoptosis, growth and differentiation. and other mechanisms which regularly prevent cancer.

8. What type of K-12 education did Megan Majocha obtain? Choose all that apply.
   a. Residential school for the deaf ✔
   b. Mainstreamed program ✔
   c. Oral-only day program
   d. No special program

9. Are there other deaf people in Megan's family? Choose all that apply.
   a. Her mother is deaf. ✔
   b. Her father is deaf. ✔
   c. She has a deaf sibling. ✔
   d. Her grandparents on both sides are deaf. ✔

10. When did Megan first decide she wanted to study genetics?
    a. In elementary school
    b. In high school
    c. In college ✔
    d. In graduate school

11. Short answer: How does Megan primarily identify herself?
    Megan identifies herself as Deaf first, above all things
    Note: Megan does not identify herself as hearing impaired! The label has a different meaning.

12. Short answer: What challenges does Megan face in her research?
    Megan states she has trouble finding interpreters who are qualified to interpret science, because most are not.