**Danny and Delilah**

Danny and Delilah were playing a game where they drew digits and placed them on a game board. Danny built the number 247. Delilah built the number 724.

How much bigger is the 2 in Danny’s number than the 2 in Delilah’s number?

How much smaller is the 4 in Delilah’s number than the 4 in Danny’s number?

Write a sentence explaining how the size of the 7 in Danny’s number compares to the size of the 7 in Delilah’s number.

**Danny and Delilah Part 2**

During the game, Danny told Delilah that when you multiply a number by 10, you just always add 0 to the end of the number. Think about his statement (conjecture), then answer the following questions.

* When does Danny’s statement (conjecture) work?
* When doesn’t Danny’s statement (conjecture) work?
* Is the opposite true? When you divide a number by 10, can you just remove a 0 from the end of the number? When does that work? When doesn’t that work?
* Rewrite Danny’s statement (conjecture) so that it is true for ALL numbers.
* Write a statement (conjecture) about what happens when you divide a number by 10.
* Rewrite your statement (conjecture) again so that it applies to other powers of 10.
* Explain how these statements (conjectures) are related to place value. (HINT: Think about the decimal point!)

**Running Relay Races**

In a relay race each runner runs 200 yards each. The individual times are below.

|  |  |  |  |
| --- | --- | --- | --- |
| Team A | | Team B | |
| Sarah | 19.54 seconds | Heidi | 19.61 seconds |
| Lisette | 20.07 seconds | Lindsay | 19.92 seconds |
| Bridget | 19.46 seconds | Sierra | 20.09 seconds |
| Monica | 19.44 seconds | Nancy | 19.48 seconds |

1. Rounded to the nearest whole second which team was fastest? By how much were they faster?
2. Rounded to the nearest tenth of a second which team was faster? By how much were they faster?
3. Based on the actual times which team was faster? By how much were they faster?
4. Explain why the answers for the 3 questions above are different.