# Quantization Distance Lab

Choose the nearest beat without changing every property.

Name _____ Date _____

Quantize each start to the nearest whole beat at 100% strength. Move the entire note; preserve its duration and pitch. All positions are in quarter-note beats. None is exactly halfway.

| Event | Original start | Length | Target grid |
|---|---|---|---|
| A | 1.10 | 0.50 | 1, 2, 3, 4, 5 |
| B | 1.85 | 1.00 | 1, 2, 3, 4, 5 |
| C | 3.20 | 0.50 | 1, 2, 3, 4, 5 |
| D | 3.90 | 1.00 | 1, 2, 3, 4, 5 |

**Use the model above. Write a brief answer for each item.**

**1. What is the new start of A?**

**2. What is the new start of B?**

**3. What is the new start of C?**

**4. What is the new start of D?**

**5. Which events move earlier?**

**6. Which event moves farthest, and by how much?**

**7. What is the new end position of B?**

**8. Does this operation preserve the original small timing offsets?**

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**Use the model above. Write a brief answer for each item.**

**1. What is the new start of A?**

Beat 1

**2. What is the new start of B?**

Beat 2

**3. What is the new start of C?**

Beat 3

**4. What is the new start of D?**

Beat 4

**5. Which events move earlier?**

A and C

**6. Which event moves farthest, and by how much?**

C: 0.20 beat earlier.

**7. What is the new end position of B?**

3.00: start 2.00 + length 1.00.

**8. Does this operation preserve the original small timing offsets?**

No. It removes those offsets by aligning starts to the grid.