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| **Worksheet for Lab on Friction** | **Name** |  |
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|  | **Date** |  |

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|  | **Partner #1** |  |
|  |  |  |
|  | **Partner #2** |  |

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| **Experiment 1: Kinetic friction, horizontal track** |
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| Attach Table 1, done in Excel, with graph on the same page. |
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| Fill in your result for $μ\_{k}=$ : |
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|  |  |  |
| --- | --- | --- |
|  | $μ\_{k}=$ |  |

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| **Experiment 2: Static Friction, horizontal track** |
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| Attach Table 2, done in Excel, with graph on the same page. Pick a suitable title *different*from Experiment 1. Fill in your result for $μ\_{s}=$ |
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|  | $μ\_{s}=$ |  |

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| **Experiment 3: Kinetic friction, inclined track** |
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| Attach Table 3, done in Excel, with graph on the same page. Make sure the axis labels are atthe edges of your plot. Fill in your result for $μ\_{k}=$ : |
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| --- | --- | --- |
|  | $μ\_{k}=$ |  |

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| Find the percentage difference between $μ\_{k}$ obtained in Exp 1 and in Exp 3: |
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| $$\%diff=\left|\frac{μ\_{k Exp 1}-μ\_{k Exp 3}}{μ\_{k Exp Avg}}\right| x 100\%=2\left|\frac{μ\_{k Exp 1}-μ\_{k Exp 3}}{μ\_{k Exp 1}+μ\_{k Exp 3}}\right| x 100\%$$ |
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| --- | --- |
| **%diff** |  |

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| **Over 🡺** |
| Which coefficient is larger: the coefficient of static friction, or the coefficient of kinetic friction?Think about the shape and texture of the materials involved at a microscopic scale, and try to giveyour own explanation of why this is so. |
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