

Oct. 12

What factors affect Friction?

Most Friction
Sandpaper with weights ✓✓✓
✓✓✓✓

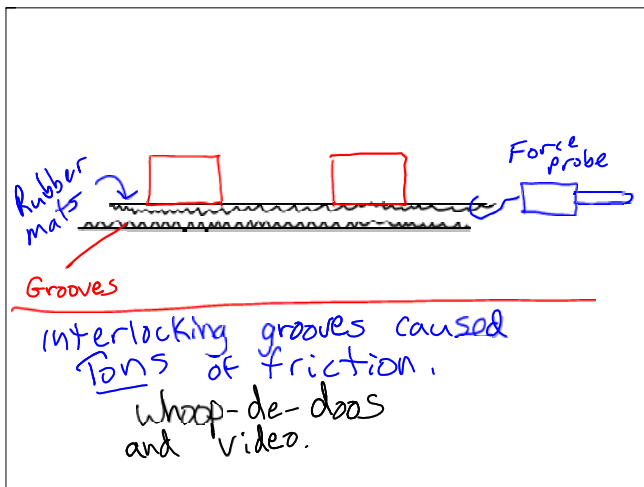
Rough
least friction
carpet ✓✓
Tabletop ✓✓
Paper ✓

smooth

With or without the weights?

More weight...
more friction

more pressure...
more friction



Factors that affect Friction

| | |
|---|-------------------------------------|
| Roughness Texture | Rougher → more friction |
| Pressure between the surfaces. (often weight) | More pressure → More friction |
| The materials that are touching. | rubber glass cloth plastic concrete |

| Approximate Coefficients of Friction | | |
|---|----------------|---------------|
| | Kinetic | Static |
| Rubber on concrete (dry) | 0.68 | 0.90 |
| Rubber on concrete (wet) | 0.58 | |
| Rubber on asphalt (dry) | 0.67 | 0.85 |
| Rubber on asphalt (wet) | 0.53 | |
| Rubber on ice | 0.15 | |
| Waxed ski on snow | 0.05 | 0.14 |
| Wood on wood | 0.30 | 0.42 |
| Steel on steel | 0.57 | 0.74 |
| Copper on steel | 0.36 | 0.53 |
| Teflon on Teflon | 0.04 | |