

Aufgaben zur Gewichtskraft:

| | | | | | | | | | | | | | | | | | |
|-------------|---|------------|--------------|------------|--------------|------------|-------------|-------------|------------|------------|------------|------------|------------|------------|-------------|-----------|------------|
| 1. | Mit welcher Kraft werden folgende Massen von der Erde angezogen? Formel : $F_G = m \cdot g$ mit $g = 9,81 \frac{\text{N}}{\text{kg}}$ Hinweis: Wandle alle Maßeinheiten vor der Berechnung in kg um. | | | | | | | | | | | | | | | | |
| | <table> <tbody> <tr> <td>m = 10 kg</td> <td>m = 1000 g</td> <td>m = 120 kg</td> <td>m = 12000 g</td> <td>m = 1 t</td> <td>m = 75 kg</td> </tr> <tr> <td>m = 12,7 kg</td> <td>m = 3,25 t</td> <td>m = 120 g</td> <td>m = 100 mg</td> <td>m = 1000 t</td> <td>m = 0,4 t</td> </tr> </tbody> </table> | m = 10 kg | m = 1000 g | m = 120 kg | m = 12000 g | m = 1 t | m = 75 kg | m = 12,7 kg | m = 3,25 t | m = 120 g | m = 100 mg | m = 1000 t | m = 0,4 t | | | | |
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| 2. | Mit welcher Kraft werden folgende Massen vom Mond angezogen? Formel : $F_G = m \cdot g$ mit $g = 1,6 \frac{\text{N}}{\text{kg}}$ Hinweis: Wandle alle Maßeinheiten vor der Berechnung in kg um. | | | | | | | | | | | | | | | | |
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| 3. | Mit welcher Kraft werden folgende Massen vom Mars angezogen? Formel : $F_G = m \cdot g$ mit $g = 4,3 \frac{\text{N}}{\text{kg}}$ Hinweis: Wandle alle Maßeinheiten vor der Berechnung in kg um. | | | | | | | | | | | | | | | | |
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| 4. | Welche Massen gehören zu den auf sie wirkenden Gewichtskräften? Formel : $m = \frac{F}{g}$ mit $g = 9,81 \frac{\text{N}}{\text{kg}}$ Hinweis: Wandle alle Gewichtskräfte vor der Berechnung in N um. | | | | | | | | | | | | | | | | |
| | <table> <tbody> <tr> <td>F = 10 N</td> <td>F = 1000 mN</td> <td>F = 120 N</td> <td>F = 12000 mN</td> </tr> <tr> <td>F = 12,7 N</td> <td>F = 3,25 kN</td> <td>F = 120 mN</td> <td>F = 100 kN</td> </tr> </tbody> </table> | F = 10 N | F = 1000 mN | F = 120 N | F = 12000 mN | F = 12,7 N | F = 3,25 kN | F = 120 mN | F = 100 kN | | | | | | | | |
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| 5. | Berechne aus den Daten für Masse und Kraft die zugehörige Gravitationskonstante. Formel : $g = \frac{F}{m}$ Hinweis: Alle Massen sind zuvor in kg und alle Kräfte in N umzuwandeln. | | | | | | | | | | | | | | | | |
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