

MUSICAL SCALES with

MARS as the FUNDAMENTAL

ALL WITHIN .5 PERCENT UNLES MARKED

1. Self ODR – farthest distance from sun over closest

1.2060745652982463351

2. SOLAR DAY

Mercury 1.3377,



3. Mass

ERIS 1.2008083201599581733, NEPTUNE 1.247, URANUS 1.056,

4. YEAR LENGTH

Earth PLANET → **1.8808148738211955109`7.698970004336019,**

Uranus PLANET → **1.3959272604011085214`7.698970004336018,**

5. Ang Mom

Pluto 2.000

6. Radius

Earth PLANET → **1.8796160624197282362`4.308013127968427,**

Ceres 1.8025561937176486897

SOLAR DAY by MARS

Mercury 1.3377,

Jupiter 1.24, Eris 1.05, Venus 1.775 (very close to 2 × %)

3 or 4 Planets

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{EntityValue}["\text{Planet}", "SolarDay", "EntityAssociation"] / \text{Entity}["\text{Planet}", "Mars"]["SolarDay"]]]}$

$Out[] := \langle \left\{ \begin{array}{l} \text{Mercury} \rightarrow 1.33775, \text{ Venus} \rightarrow 1.775416, \text{ Earth} \rightarrow 0.9732443, \text{ Mars} \rightarrow 1.00000000, \\ \text{Jupiter} \rightarrow 0.80503, \text{ Saturn} \rightarrow 0.86430, \text{ Uranus} \rightarrow 0.69909, \text{ Neptune} \rightarrow 0.65330 \end{array} \right\} \rangle$

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{Entity}["\text{Planet}", "Mars"]["SolarDay"] / \text{EntityValue}["\text{Planet}", "SolarDay", "EntityAssociation"]]]}$

$Out[] := \langle \left\{ \begin{array}{l} \text{Mercury} \rightarrow 0.74753, \text{ Venus} \rightarrow 0.563248, \text{ Earth} \rightarrow 1.0274912, \text{ Mars} \rightarrow 1.00000000, \\ \text{Jupiter} \rightarrow 1.2422, \text{ Saturn} \rightarrow 1.1570, \text{ Uranus} \rightarrow 1.4304, \text{ Neptune} \rightarrow 1.5307 \end{array} \right\} \rangle$

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{Entity}["\text{MinorPlanet}", "Pluto"]["SolarDay"] / \text{Entity}["\text{Planet}", "Mars"]["SolarDay"]]]}$

$Out[] := 1.554193$

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{Entity}["\text{MinorPlanet}", "Eris"]["SolarDay"] / \text{Entity}["\text{Planet}", "Mars"]["SolarDay"]]]}$

$Out[] := 1.05$

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{Entity}["\text{Planet}", "Mars"]["SolarDay"] / \text{Entity}["\text{MinorPlanet}", "Ceres"]["SolarDay"]]]}$

$Out[] := 1.358$

MASS by MARS

ERIS 1.2008083201599581733, NEPTUNE 1.247, URANUS 1.056,

CERES 1.32, VENUS 1.896, 5 Planets

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{EntityValue}["\text{Planet}", "Mass", "EntityAssociation"] / \text{Entity}["\text{Planet}", "Mars"]["Mass"]]]}$

$Out[] := \langle \left\{ \begin{array}{l} \text{Mercury} \rightarrow 0.514, \text{ Venus} \rightarrow 1.896, \text{ Earth} \rightarrow 1.163, \text{ Mars} \rightarrow 1.000, \\ \text{Jupiter} \rightarrow 1.444, \text{ Saturn} \rightarrow 1.730, \text{ Uranus} \rightarrow 1.057, \text{ Neptune} \rightarrow 1.247 \end{array} \right\} \rangle$

$In[] := 2^{\text{FractionalPart}[\text{Log}[2, \text{Entity}["\text{Planet}", "Mars"]["Mass"] / \text{EntityValue}["\text{Planet}", "Mass", "EntityAssociation"]]]}$

$Out[] := \langle \left\{ \begin{array}{l} \text{Mercury} \rightarrow 1.944, \text{ Venus} \rightarrow 0.5273, \text{ Earth} \rightarrow 0.860, \text{ Mars} \rightarrow 1.000, \\ \text{Jupiter} \rightarrow 0.692, \text{ Saturn} \rightarrow 0.578, \text{ Uranus} \rightarrow 0.946, \text{ Neptune} \rightarrow 0.802 \end{array} \right\} \rangle$

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["Planet", "Mars"]["Mass"] / Entity["MinorPlanet", "Ceres"]["Mass"]]]
```

```
Out[*]= 1.32
```

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["Planet", "Mars"]["Mass"] / Entity["MinorPlanet", "Pluto"]["Mass"]]]
```

```
Out[*]= 1.532
```

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["Planet", "Mars"]["Mass"] / Entity["MinorPlanet", "Eris"]["Mass"]]]
```

```
Out[*]= 1.20
```

```
In[*]:= -----
```

YEAR LENGTH

Earth → 1.8808149,

Uranus → 1.3959273,

Ceres 1.22, nearly Venus 1.528, Uranus 1.3959

2 or 3 Planets

```
In[*]:= 2^FractionalPart[Log[2, EntityValue["Planet", "OrbitPeriod", "EntityAssociation"] /
  Entity["Planet", "Mars"]["OrbitPeriod"]]]
```

```
Out[*]= { | Mercury → 0.5122089, Venus → 0.6541702, Earth → 0.5316844, Mars → 1.0000000,
  Jupiter → 1.5767645, Saturn → 1.9570630, Uranus → 1.3959273, Neptune → 1.3689915 | }
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["Planet", "Mars"]["OrbitPeriod"] /
  EntityValue["Planet", "OrbitPeriod", "EntityAssociation"]]]
```

```
Out[*]= { | Mercury → 1.952329, Venus → 1.5286541, Earth → 1.8808149, Mars → 1.0000000,
  Jupiter → 0.6342101, Saturn → 0.5109698, Uranus → 0.7163697, Neptune → 0.7304647 | }
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Eris"]["OrbitPeriod"] /
  Entity["Planet", "Mars"]["OrbitPeriod"]]]
```

```
Out[*]= 1.1566
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Pluto"]["OrbitPeriod"] /
  Entity["Planet", "Mars"]["OrbitPeriod"]]]
```

```
Out[*]= 1.0297911
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Ceres"]["OrbitPeriod"] /
Entity["Planet", "Mars"]["OrbitPeriod"]]]
```

```
Out[*]= 1.2229047
```

Mars Ang Mom

Pluto 2.000 !!!!

Earth 1.21, Eris 1.21, Venus 1.34, Neptune 1.34

```
In[*]:= 2^FractionalPart[Log[2, angMa / angMom]]
```

```
Out[*]= {0.70, 0.745, 1.21, 1.000, 1.46, 0.517, 0.579, 0.773, 0.74, 2.000, 1.21}
```

```
In[*]:= 2^FractionalPart[Log[2, angMom / angMa]]
```

```
Out[*]= {1.43, 1.34, 0.82, 1.000, 0.68, 1.934, 1.728, 1.293, 1.34, 0.500, 0.82}
```

Radius by MARS

within .5 percent

Earth PLANEI → 1.8796160624197282362`4.308013127968427,

Ceres 1.8025561937176486897`3.323660855758724

```
In[*]:= 2^FractionalPart[Log[2, EntityValue["Planet", "Radius", "EntityAssociation"] /
Entity["Planet", "Mars"]["Radius"]]]
```

```
Out[*]= {Mercury → 0.720, Venus → 1.785, Earth → 1.8796, Mars → 1.0000,
Jupiter → 1.290, Saturn → 1.075, Uranus → 1.871, Neptune → 1.82}
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["Planet", "Mars"]["Radius"] /
EntityValue["Planet", "Radius", "EntityAssociation"]]]
```

```
Out[*]= {Mercury → 1.39, Venus → 0.560, Earth → 0.5320, Mars → 1.0000,
Jupiter → 0.775, Saturn → 0.930, Uranus → 0.535, Neptune → 0.551}
```

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["Planet", "Mars"]["Radius"] / Entity["MinorPlanet", "Eris"]["Radius"]]
```

```
Out[*]= 1.457
```

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["Planet", "Mars"]["Radius"] / Entity["MinorPlanet", "Pluto"]["Radius"]]
```

```
Out[*]= 1.4243
```

```
In[1]:= 2^FractionalPart[
  Log[2, Entity["Planet", "Mars"]["Radius"] / Entity["MinorPlanet", "Ceres"]["Radius"]]
```

```
Out[1]= 1.803
```

1.2060745652982463351