Mars Data

Eccentricity: .0935

Avg Orbital Velocity: 24.13 km/s = 5.08 au/yr

Avg distance to Sun: 1.52 AU = 2.28x10^8 km

Perihelion: 206.62 \* 10^6 km = 1.3775 au

Aphelion: 249.23 \* 10^6 km = 1.6615 au

Period: 686.98 days = 5.9355 E7 s

Max orbital velocity: 26.5 km/s = 5.58 au/yr

Min orbital velocity: 21.97 km/s = 4.62 au/yr

Mass of planet: 6.4x10^23 kg

Mars applet gives with delta-t = 10,000 s

T = 5.834E7 s

Area = pi\*a\*b

e = c/a, where c = center to focus and a is semi-major axis

b^2 = a^2 – c^2

b = (1.5195^2 – 0.142^2)^.5 = 1.5128

add inputs for e and a

add outputs for c and b