



ACTIVITY: Solid Rocket Boosters

Directions

Complete the following activities using the solid rocket booster information sheet.

Your Mission:

Your launch team needs the missing information to complete the launch. Find the key terms or numbers and accurately fill in each blank.

- Each booster rocket is attached to either side of the _____ (ET) and is _____ feet (_____ meters) tall with a diameter of _____ feet (_____ meters). Each SRB weighs approximately _____ pounds (_____ kilograms) at launch with roughly _____ percent being the weight of the _____ itself.
- The solid rocket boosters (_____) operate in parallel with the _____ for the first _____ minutes of flight to provide the additional thrust needed for the orbiter to escape the _____ pull of the Earth. At an altitude of approximately _____ km (_____ nautical miles), the boosters separate from the _____ tank, descend on parachutes, and land in the _____ Ocean.
- In addition to the solid rocket _____, the booster contains the structural, _____, _____, separation, recovery, and _____ and _____ subsystems.
- The two SRBs provide _____ percent of the main _____ needed to lift the Space Shuttle off the launch pad. Each booster has a thrust of approximately _____ pounds (_____ kilonewtons) at launch and help lift the Shuttle up to an altitude of about _____ feet, or _____ miles (_____ kilometers).
- The solid fuel, or _____, is a mixture of _____, _____, and _____.

Your Mission:

Write these statistics in scientific notation. Don't forget to label your units. The first one is done for you.

Booster Statistic	Write the number without the place-holding zeros	Place the decimal point after the first digit	Count the number of places you moved the decimal point	Write the number in scientific notation
Thrust at lift-off 1,202,000 kg	1202	1.202	1.202000	1.202×10^6 kg
Propellant Weight 502,000 kg				
Gross weight 589,700 kg				
Gross weight 1,300,000 lb				
Thrust of both boosters 5,300,000 lb				

Your Mission:

Label the orbiter parts below.

