

```

/* Montgomery 2.46 data */
/* data mont2_26; */
/* INPUT x type @@; */
/* datalines; */
/* 65 1 64 2 */
/* 81 1 71 2 */
/* 57 1 83 2 */
/* 66 1 59 2 */
/* 82 1 65 2 */
/* 82 1 56 2 */
/* 67 1 69 2 */
/* 59 1 74 2 */
/* 75 1 82 2 */
/* 70 1 79 2 */
/* ; */
/* run; */

/* find power */
proc power;
  twosamplemeans test=diff
    meandiff = 2
    stddev = 9.3155
    npergroup = 10
    power = .;
run;

/* find sample size for power=0.9 */
proc power;
  twosamplemeans test=diff_satt
    meandiff = 1
    STDDEV = 9.3155
    ntotal = .
    power = 0.9;
run;

```

2.46. Consider the experiment described in Problem 2.26. If the mean burning times of the two flares differ by as much as 2 minutes, find the power of the test. What sample size would be required to detect an actual difference in mean burning time of 1 minute with a power of at least 0.90? 