4.18

Show that the 1-D convolution theorem also holds for discrete variables:

4.20

Use the sifting property of the 2-D impulse to show that convolution of a 2-D continuous function, , with an impulse shifts the function so that its origin is located at the location of the impulse.

(If the impulse is at the origin, the function is copied exactly as it was.)

(Hint: Study the solution to Problem 4.4).

The sifting property:

Show: