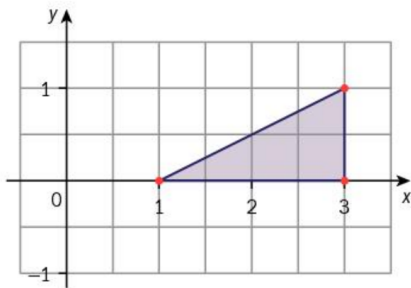# General Question types
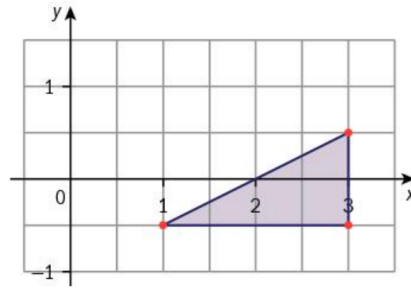
- Proving that a function is pdf or not:

1. Which of the following functions could be pdf?
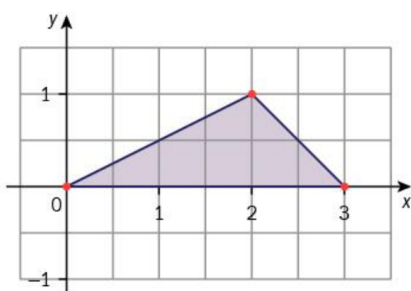
a)

b)

c)

d)

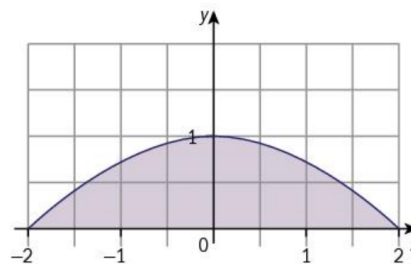Integral of pdf from -∞ to +∞ is 1. And f(x) >= 0 for all x.

- Finding value of constant in a pdf:

2. If f(x) = k.x^2 and it is defined over the interval -1 <= x <= 1. What is the value of k?
3. If f(x) = x/4 is pdf and defined over 1 <= x <= k. Find k.

- Finding probability:

4. For the pdf in question no. 2, find P(X>0.4) and P(X< 0.7).

- Finding mean, median, variance and mode.

5. f(x) = (1/39)*(9-x^2) for -3 < x < 3. Find the mode, median, expectance and variance of the pdf.