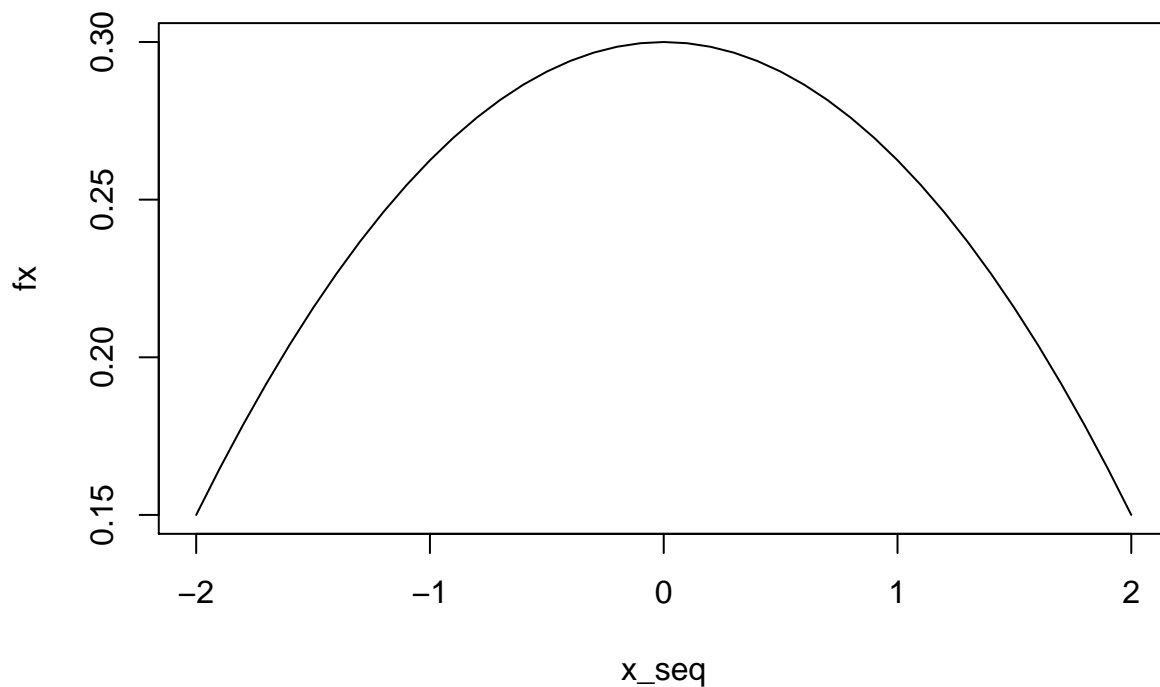# CH 4.1

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10/24/2018

MATH 324 Ch 4.1

PDF (Probability Density Function): Calculations

1A)

```
x_seq = seq(-2, 2, by = 0.1)
fx = 0.075*(4-0.5*x_seq^2)
plot(x_seq, fx, type = 'l')
```


PDF: Calculations Written as Word Problems & More Exotic Looking Densities

3A)

```
y_seq <- seq(0, 10, by = 1)
ylength <- length(y_seq)
yz <- 1:ylength
Ysum <- y_seq
for (y in yz){
  for(j in 1:y){
  if ((y >= 0) && (y < 5 )){
    Ysum[y] = (1/25)*(y)
```

```
  }
  else if((y >= 5) && (y < 10)){
    Ysum[y] = (2/5)-((1/25)*(y))
  }
  else{
    Ysum[y] = 0
  }
  }
}
plot(y_seq,Ysum, type = "l")
```