

Pemrograman R CPMK 3a

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Soal Nomor 1

```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.0.3
```

```
library(polynom)
```

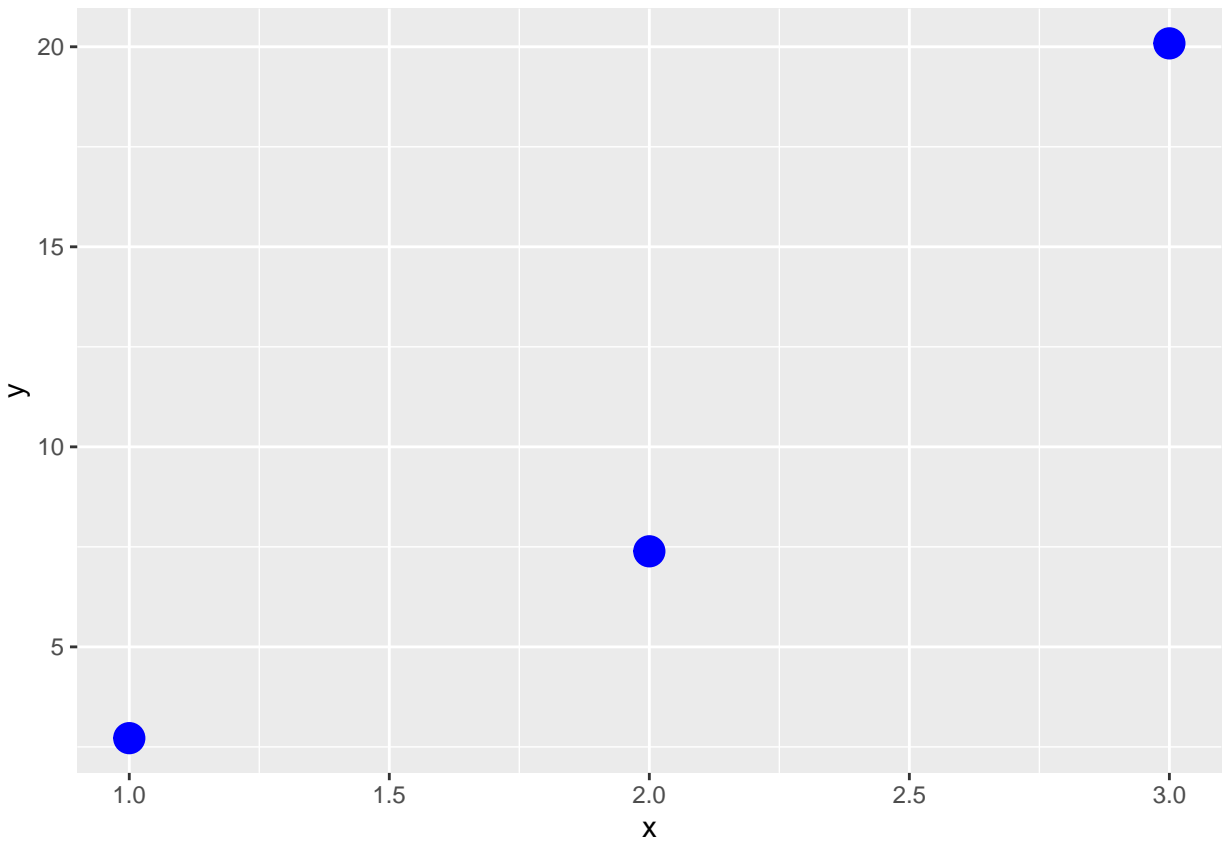
```
## Warning: package 'polynom' was built under R version 4.0.3
```

```
x <- c(1, 2, 3)
```

```
y <- c(2.7183, 7.3891, 20.0855)
```

```
dat <- data.frame(cbind(x, y))
```

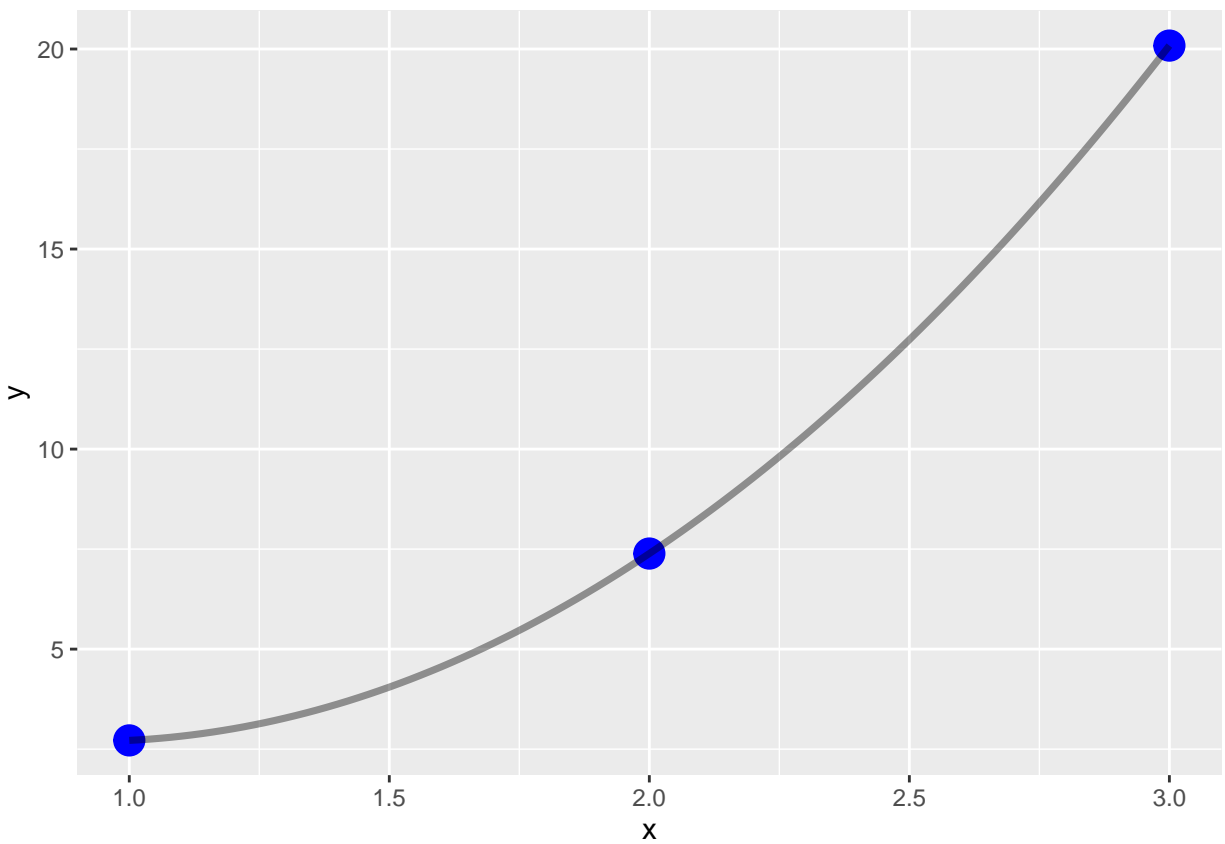
```
ggplot(dat, aes(x=x, y=y)) + geom_point(size=5, col='blue')
```



```
poly.calc(x, y)
```

```
## 6.0731 - 7.3676*x + 4.0128*x^2
```

```
f <- function(x) {  
  return(6.0731 - 7.3676*x + 4.0128*x^2)  
}  
  
ggplot(dat, aes(x=x, y=y)) +  
  geom_point(size=5, col='blue') +  
  stat_function(fun = f, size=1.25, alpha=0.4)
```



```
f(2.6)
```

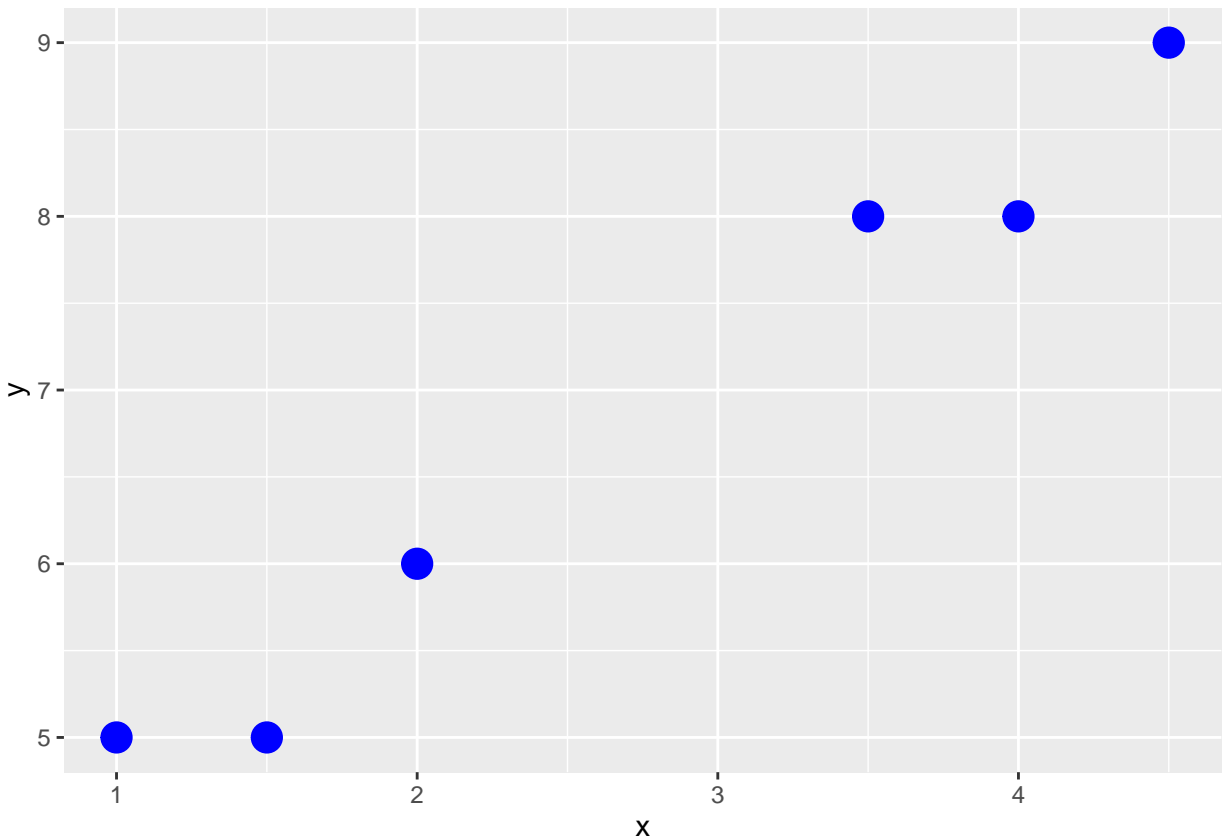
```
## [1] 14.04387
```

Soal Nomor 2

```
library(ggplot2)  
library(polynom)
```

```
x <- c(1, 1.5, 2, 4, 3.5, 4.5)
y <- c(5, 5, 6, 8, 8, 9)
dat <- data.frame(cbind(x, y))

ggplot(dat, aes(x=x, y=y)) + geom_point(size=5, col='blue')
```

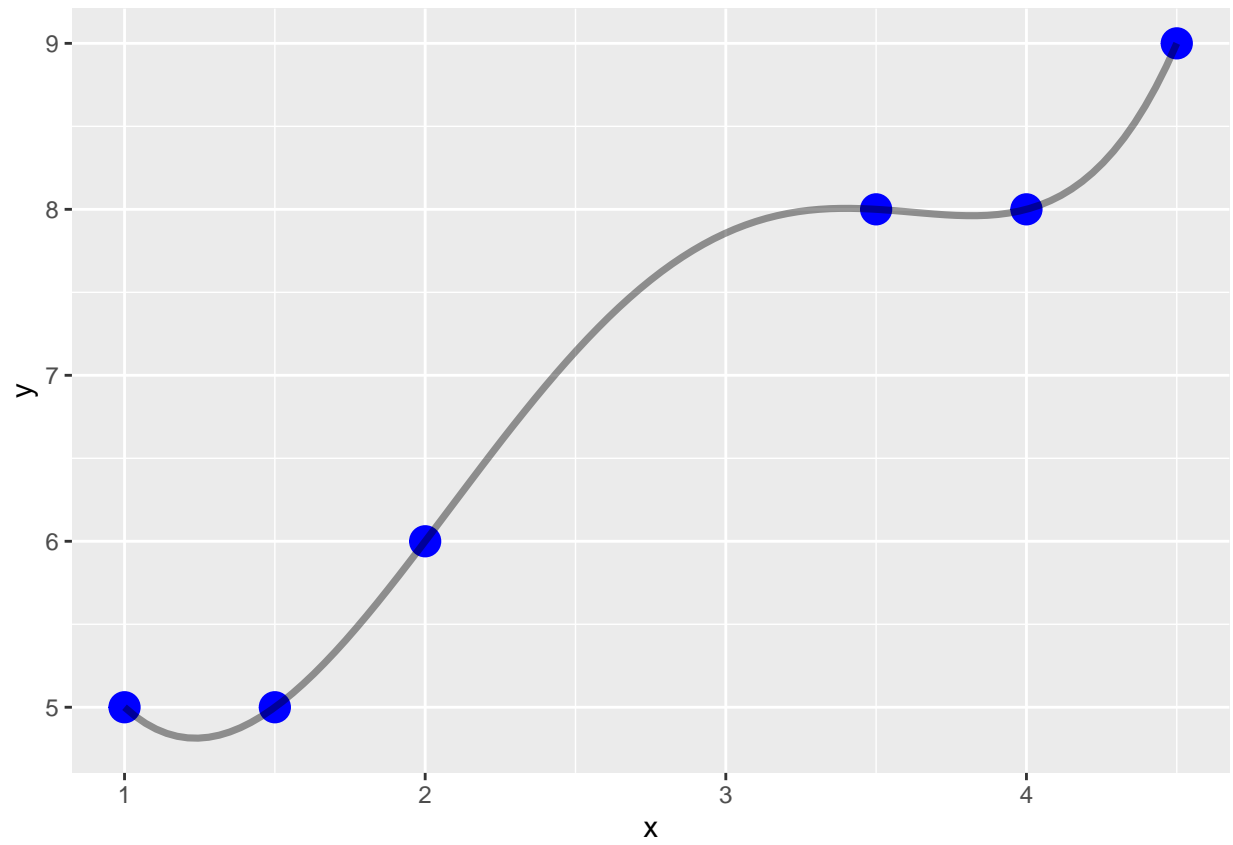


```
poly.calc(x, y)
```

```
## 12 - 13.60952*x + 7.761905*x^2 - x^3 - 0.1904762*x^4 + 0.03809524*x^5
```

```
f <- function(x) {
  return(12 - 13.60952*x + 7.761905*x^2 - x^3 -
    0.1904762*x^4 + 0.03809524*x^5)
}

ggplot(dat, aes(x=x, y=y)) +
  geom_point(size=5, col='blue') +
  stat_function(fun = f, size=1.25, alpha=0.4)
```



`f(5)`

`## [1] 13.00002`