In [28]:
```
m = 100
X = 6 * np.random.rand(m, 1) - 3
y = 0.5 * X**2 + X + 2 + np.random.randn(m, 1)
```

In [30]:
```
from sklearn.preprocessing import PolynomialFeatures
poly_features = PolynomialFeatures(degree=2, include_bias=False)
X_poly = poly_features.fit_transform(X)
X[0]
```

Out[30]:
```
array([-0.75275929])
```

In [31]:
```
X_poly[0]
```

Out[31]:
```
array([-0.75275929,  0.56664654])
```

In [32]:
```
lin_reg = LinearRegression()
lin_reg.fit(X_poly, y)
lin_reg.intercept_, lin_reg.coef_
```

Out[32]:
```
(array([1.78134581]), array([[0.93366893, 0.56456263]]))
```