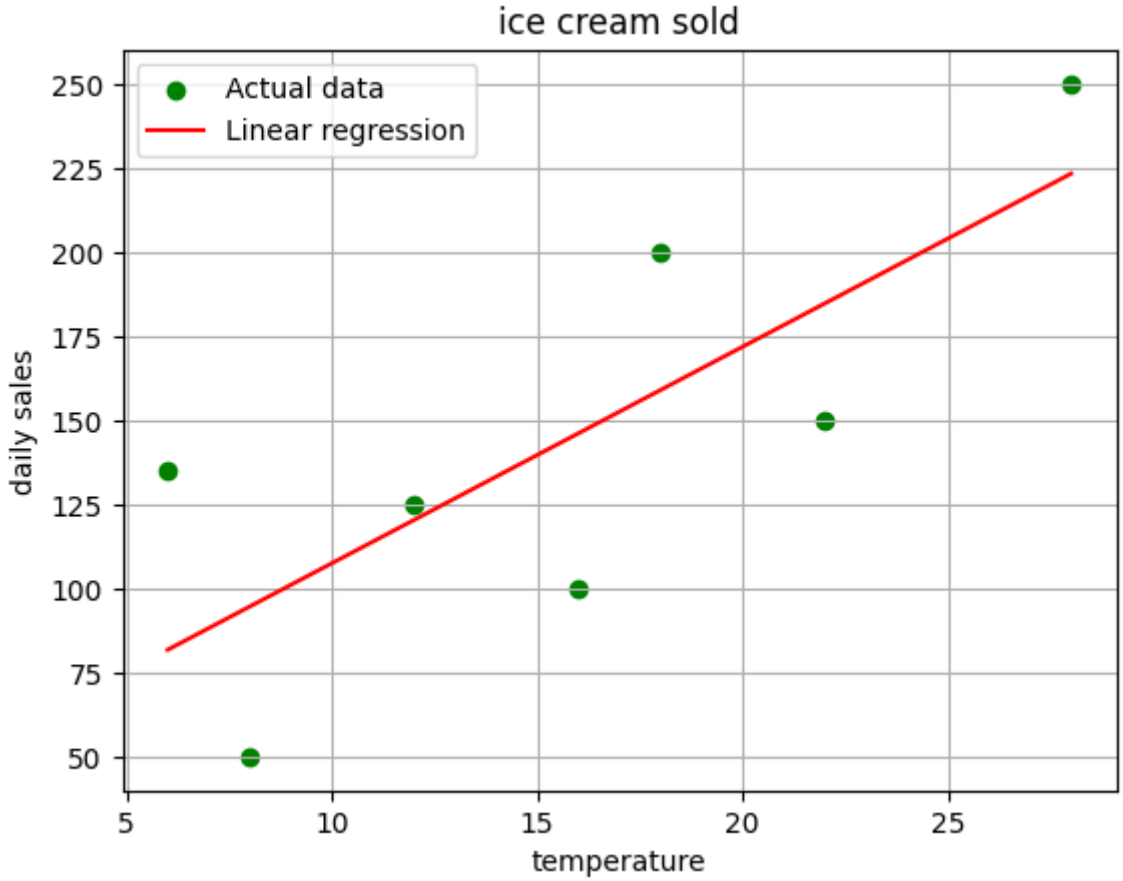
In [5]:

```
import numpy as np
from scipy.stats import linregress
from sklearn.metrics import mean_absolute_error, mean_squared_error
import matplotlib.pyplot as plt
# Provided dataset
X = np.array([6, 8, 12, 16, 18, 22, 28])  # Temperature (°C)
y = np.array([135, 50, 125, 100, 200, 150, 250])  # Daily Sales (Litres)

# Perform linear regression using linregress
slope, intercept, r_value, p_value, std_err = linregress(X, y)

# Predictions
y_pred = intercept + slope * X


plt.scatter(X, y, color='green',label='Actual data')
plt.plot(X, y_pred, color='red', label='Linear regression')
plt.xlabel('temperature')
plt.ylabel('daily sales')
plt.title('ice cream sold')
plt.legend()
plt.grid(True)
plt.show()

# Calculate metrics
mae = mean_absolute_error(y, y_pred)
mse = mean_squared_error(y, y_pred)
rmse = np.sqrt(mse)

# Print the metrics
print("Mean Absolute Error (MAE):", mae)
print("Mean Squared Error (MSE):", mse)
print("Root Mean Squared Error (RMSE):", rmse)

# Coefficients of the linear regression model
print("Intercept:", intercept)
print("Slope (Coefficient):", slope)
```




```
Mean Absolute Error (MAE): 35.85804132973944
Mean Squared Error (MSE): 1510.4728212039531
Root Mean Squared Error (RMSE): 38.864801828955116
Intercept: 43.16823899371069
Slope (Coefficient): 6.434748427672956
```