# Congratulations! You passed!

**Grade received** 90.90%
**Latest Submission Grade** 90.91%
**To pass** 80% or higher

**Go to next item**

**1.** Mean-centering the data helps MCMC Sampling by **1 / 1 point**

- (●) Reducing the correlation between the variables
- ( ) Reducing the variance of the variables

**Correct**

**2.** Hierarchical Linear Regression is beneficial when pooling data results in vital group information being lost **1 / 1 point**

- (●) True
- ( ) False

**Correct**

**3.** Non-hierarchical Linear Regression with groups of sparse data can result in **1 / 1 point**

- (●) very large credible intervals
- ( ) very small credible intervals

**Correct**

**4.** In Hierarchical Linear Regression, prior parameters for distributions are **1 / 1 point**

- ○ are constant values
- ◉ Distributions

✓ **Correct**

**5.** Polynomial Regression is useful for **1 / 1 point**

- ○ Linear data
- ◉ Non-linear data

✓ **Correct**

**6.** Multiple Linear Regression is used when you have **1 / 1 point**

- ○ Multiple dependent or target variables
- ◉ Multiple independent or predictor variables

✓ **Correct**

**7.** PyMC3 allows you to model multidimensional variables using the shape parameter in a distribution definition, without having to create multiple parameters explicitly. **1 / 1 point**

- ◉ True
- ○ False

✓ **Correct**

**8.** The inverse link function of linear regression is **1 / 1 point**

- ○ Logit function
- ◉ Identity function

**Correct**

**9.** Multiclass classification uses the **1 / 1 point**

- Sigmoid function
- Softmax function

**Correct**

**10.** A binary classification problem uses the Bernoulli distribution to model the target, the multiclass classification uses **1 / 1 point**

- Categorical distribution
- Poisson distribution

**Correct**

**11.** Does this code indicate a **0 / 1 point**

```
α_tmp = pm.Normal('α_tmp', mu=2, sd=5, shape=M)
β = pm.Normal('β', mu=0, sd=10, shape=M)
ϵ = pm.HalfCauchy('ϵ', 5)
v = pm.Exponential('v', 1/30)
y_pred = pm.StudentT('y_pred', mu=α_tmp[idx] + β[idx] * x_centered,
                     sd=ϵ, nu=v, observed=y_m)
```

- Hierarchical model
- Non-hierarchical model

**Incorrect**
The prior distribution has constant parameters.