# Mock Exam Q3 Part C-1

Implement an alternative lighting model, e.g. from chapter 13 of Boreskov and Shikin

There are many lighting models available, but the most two common and simple one is Phong and Blinn-Phong lighting model.

The lighting model that was covered in Coursera video is Blinn-Phong model.

Below is the Phong lighting model.



Diagram

Description automatically generated

Below is the Blinn-Phong lighting model.

Diagram

Description automatically generated with medium confidence

The main different between them is the way specular is calculated.

Phong : dot product of r and v

Blinn-Phong : dot product of n and h

Text

Description automatically generated

Text

Description automatically generated

See LitShader code.

Add in a new LitMaterial with LitShader and a new Sphere with LitMaterial.

Test out the two lighting model.

|  |  |
| --- | --- |
| A white egg on a black surface  Description automatically generated with low confidence | A picture containing pool ball, light, night sky  Description automatically generated |
| Phong | Blinn-Phong |

Other models that you can try in the textbook are:

* Ward isotropic model
* Minnaert lighting
* Lommel-Seeliger lighting
* Rim lighting