**Biochemistry: DNA, Proteins, and their Applications – Lecture 4 Worksheet**

Definitions:

* CRISPR:
* PAM:
* HDR:
* PFS:
* dCas9:
* GFP:
* crRNA:
* sgRNA:
* Spacer:
* Indels:
* Zinc Finger Motif:
* KRAB:
* APOBEC:

CRISPR/Cas:

1. How does the PAM site help CRISPR/Cas editing?
2. Which repair mechanism elicited by CRISPR/Cas9 editing results in indels? Which repair mechanism results in precise editing? Why is this?
3. VP64 activates transcription of dCas9. This makes VP64 what type of protein/factor?
4. How do KRAB domains repress transcription?
5. What DNA bases can the PFS be?
6. What was the most interesting topic to you discussed today?