

STAT-431: HW-2

Problem 2

c) Credible Intervals

```
alpha = 6
beta = 25

ci = qbeta(c(0.025, 0.975), alpha, beta)

print("The 95% credible interval for this case is")
```

```
## [1] "The 95% credible interval for this case is"
```

```
round(ci,4)
```

```
## [1] 0.0771 0.3472
```

d) Posterior Probability

```
post_prob = pbeta(0.2, alpha, beta)

print("The posterior probability that the theta <= 0.2 is")
```

```
## [1] "The posterior probability that the theta <= 0.2 is"
```

```
print(round(post_prob,3))
```

```
## [1] 0.572
```