# ICA6

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## Question 1

### a

$p(x) = cx \int(0,4) = 1/2*cx^2$

$8c = 1$

$c = 1/8$

### b

$\int(0,2)1/8*x^2 = 4/16 = 1/4$

The answer is 1/4.

## Question 2

### a

```r
pexp(90,1/240)
```

```
## [1] 0.3127107
```

### b

```r
pexp(90,1/240)/pexp(300,1/240)
```

```
## [1] 0.4382801
```

### c

```r
1-pexp(400,1/240)
```

```
## [1] 0.1888756
```

## Question 3

### a

```r
1-pnorm(16.7,10,2.5)
```

```
## [1] 0.003681108
```

### b

```r
1-pnorm(17,10,2.5)
```

```
## [1] 0.00255513
```

### c

```r
pnorm(17,10,2.5)-pnorm(16.7,10,2.5)
```

```
## [1] 0.001125978
```