Quiz 6

Name:

titanic data

For all of the questions today, you will be using data for passengers from the Titanic. Here is the start of this dataset, called `titanic`:

```r
titanic <- read.csv("../data/titanic.csv", as.is = TRUE) %>%
        select(Survived, Pclass, Age, Name, Sex, Fare) %>%
        mutate(Pclass = as.factor(Pclass))
head(titanic)
```

```
##   Survived Pclass Age                                                Name
## 1        0      3  22                             Braund, Mr. Owen Harris
## 2        1      1  38 Cumings, Mrs. John Bradley (Florence Briggs Thayer)
## 3        1      3  26                              Heikkinen, Miss. Laina
## 4        1      1  35        Futrelle, Mrs. Jacques Heath (Lily May Peel)
## 5        0      3  35                            Allen, Mr. William Henry
## 6        0      3  NA                                    Moran, Mr. James
##       Sex    Fare
## 1    male  7.2500
## 2  female 71.2833
## 3  female  7.9250
## 4  female 53.1000
## 5    male  8.0500
## 6    male  8.4583
```

1.-12.

Match the number at the end of each line to the letter of the output you would have if you ran all code up to that point. For all dataframes, only the first few lines are shown. Put the letter answer next to the number given in the code.

```r
titanic$agecat[titanic$Age < 15] <- "Under 15"        # 1.
titanic$agecat[titanic$Age >= 15 &
                   titanic$Age <= 50] <- "15--50"     # 2.
titanic$agecat[titanic$Age > 50] <- "Over 50"
titanic$agecat <- factor(titanic$agecat,
                         levels = c("Under 15",
                                    "15--50",
                                    "Over 50"))

toplot_4 <- filter(titanic, !is.na(Age)) %>%          # 3.
        select(Survived, Pclass, agecat, Sex) %>%     # 4.
        group_by(Pclass, agecat, Sex) %>%
        summarize(N = n(),
                  survivors = sum(Survived == 1),
                  perc_survived = 100 * survivors / N) %>% #5.
        ungroup() %>%
```
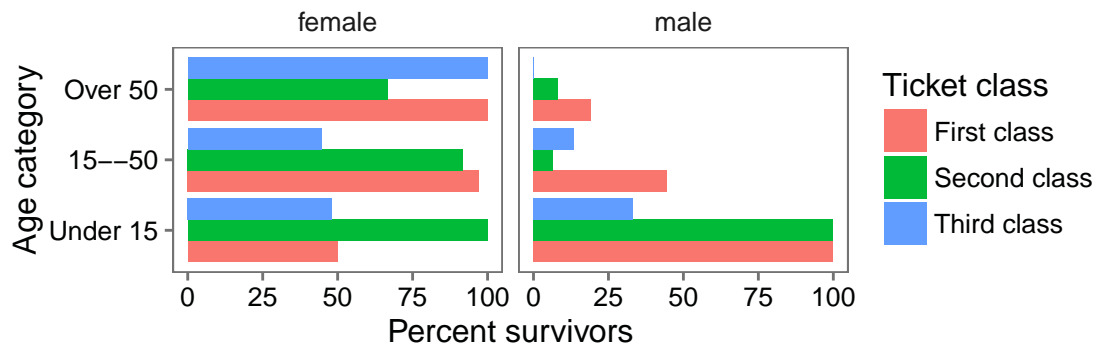
```
        mutate(Pclass = factor(Pclass, levels = c(1, 2, 3),
                               labels = c("First class", "Second class",
                                          "Third class"))) # 6.
plot_4 <- ggplot(toplot_4, aes(x = agecat, y = perc_survived, fill = Pclass)) +
        geom_bar(stat = "identity", position = "dodge") +  # 7.
        coord_flip() +                                     # 8.
        ylab("Percent survivors") + xlab("Age category") + # 9.
        theme_few() +                                      # 10.
        scale_fill_discrete(name = "Ticket class") +       # 11.
        facet_grid(. ~ Sex)                                # 12.
```

a.

b.

```
##   Survived Pclass Age                                               Name
## 1        0      3  22                            Braund, Mr. Owen Harris
## 2        1      1  38 Cumings, Mrs. John Bradley (Florence Briggs Thayer)
## 3        1      3  26                             Heikkinen, Miss. Laina
## 4        1      1  35       Futrelle, Mrs. Jacques Heath (Lily May Peel)
## 5        0      3  35                           Allen, Mr. William Henry
## 6        0      3  NA                                   Moran, Mr. James
##       Sex    Fare agecat
## 1    male  7.2500   <NA>
## 2  female 71.2833   <NA>
## 3  female  7.9250   <NA>
## 4  female 53.1000   <NA>
## 5    male  8.0500   <NA>
## 6    male  8.4583   <NA>
```

c.

```
## Source: local data frame [6 x 6]
## Groups: Pclass, agecat [3]
##
##   Pclass   agecat    Sex     N survivors perc_survived
##   (fctr)   (fctr)  (chr) (int)     (int)         (dbl)
## 1      1 Under 15 female     2         1      50.00000
## 2      1 Under 15   male     3         3     100.00000
## 3      1   15--50 female    70        68      97.14286
```

2

```
## 4       1  15--50   male    72        32       44.44444
## 5       1 Over 50 female    13        13      100.00000
## 6       1 Over 50   male    26         5       19.23077
```

d.

```
##   Survived Pclass Age                                                Name
## 1        0      3  22                             Braund, Mr. Owen Harris
## 2        1      1  38 Cumings, Mrs. John Bradley (Florence Briggs Thayer)
## 3        1      3  26                              Heikkinen, Miss. Laina
## 4        1      1  35        Futrelle, Mrs. Jacques Heath (Lily May Peel)
## 5        0      3  35                            Allen, Mr. William Henry
## 6        0      1  54                             McCarthy, Mr. Timothy J
##      Sex    Fare  agecat
## 1   male  7.2500  15--50
## 2 female 71.2833  15--50
## 3 female  7.9250  15--50
## 4 female 53.1000  15--50
## 5   male  8.0500  15--50
## 6   male 51.8625 Over 50
```
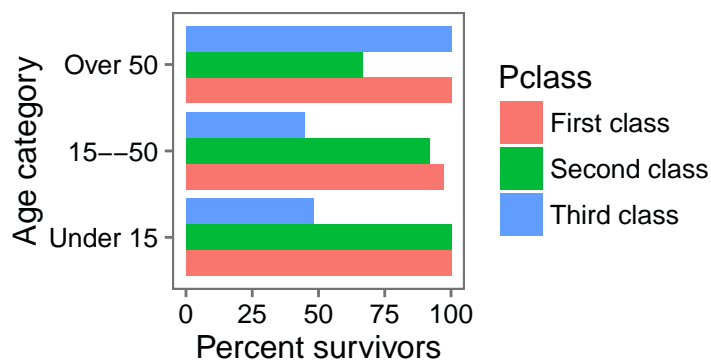
e.

```
##   Survived Pclass  agecat    Sex
## 1        0      3  15--50   male
## 2        1      1  15--50 female
## 3        1      3  15--50 female
## 4        1      1  15--50 female
## 5        0      3  15--50   male
## 6        0      1 Over 50   male
```

f.

g.

```
##   Survived Pclass Age                                                Name
## 1        0      3  22                             Braund, Mr. Owen Harris
## 2        1      1  38 Cumings, Mrs. John Bradley (Florence Briggs Thayer)
## 3        1      3  26                              Heikkinen, Miss. Laina
## 4        1      1  35        Futrelle, Mrs. Jacques Heath (Lily May Peel)
```
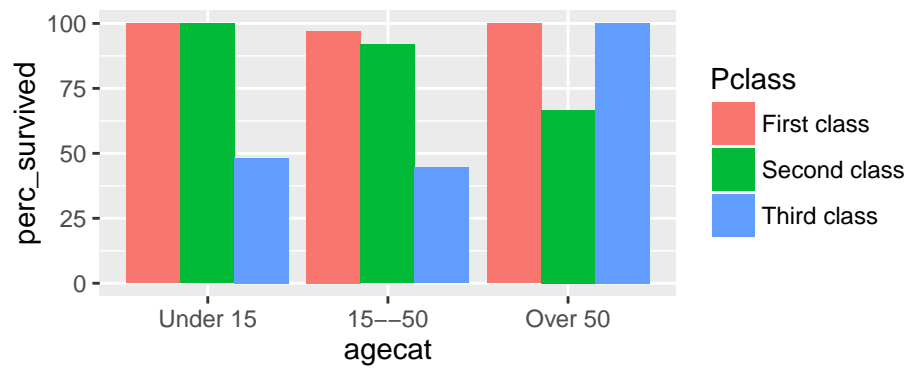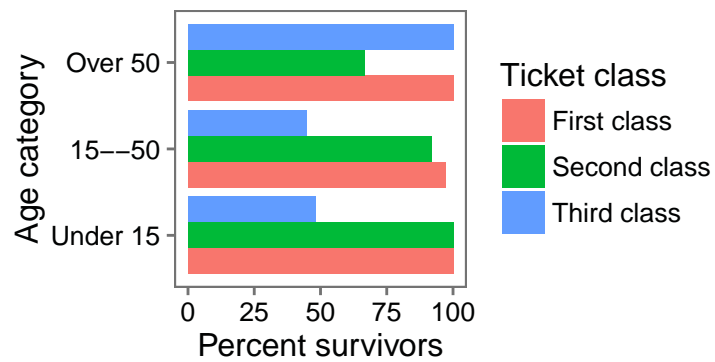
3

```
## 5         0      3  35                              Allen, Mr. William Henry
## 6         0      3  NA                                    Moran, Mr. James
##       Sex      Fare agecat
## 1    male   7.2500 15--50
## 2 female  71.2833 15--50
## 3 female   7.9250 15--50
## 4 female  53.1000 15--50
## 5    male   8.0500 15--50
## 6    male   8.4583   <NA>
```
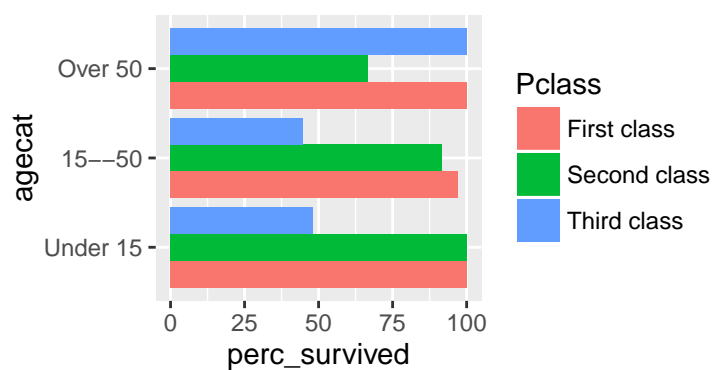
h.

i.

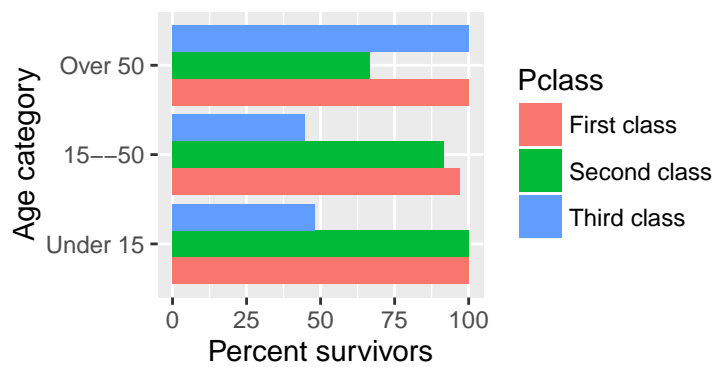j.

k.

```
## Source: local data frame [6 x 6]
##
##            Pclass     agecat     Sex     N survivors perc_survived
##            (fctr)     (fctr)   (chr) (int)     (int)          (dbl)
## 1 First class Under 15 female     2         1       50.00000
## 2 First class Under 15   male     3         3      100.00000
## 3 First class   15--50 female    70        68       97.14286
## 4 First class   15--50   male    72        32       44.44444
## 5 First class  Over 50 female    13        13      100.00000
## 6 First class  Over 50   male    26         5       19.23077
```

l.

Answers: 1. b., 2. g., 3. d., 4. e., 5. c., 6. k., 7. h., 8. j., 9. l., 10. f., 11. i., 12. a.