Directions: The final is to be done WITHOUT A CALCULATOR.
All fractions should be simplified to lowest terms. When appropriate, label answers with the proper symbol or units (for example: $\%, \mathrm{ft}, \mathrm{cm}^{2}$, etc.)

1. Simplify: $18 \div 3(6)+4$
2. Divide: $-\frac{8}{17} \div \frac{4}{5}$
3. First find the value of $x$ and $y$. Then find the perimeter and the area of the figure.


6 cm
4. A 90 cm pipe is cut into two pieces so one piece is 6 cm shorter than the other. Find the length of each piece.
5. This table lists the number of goals in the first soccer game of the Youth League. Use the table to answer the questions below. Round to the nearest tenth if necessary.

| Goals per team in the <br> first <br> fame |  |
| :--- | :--- |
| Galaxy | 3 |
| Juventus | 5 |
| Barcelona | 3 |
| FC Dallas | 2 |
| America | 2 |
| Chivas | 1 |

a) Find the mean number of goals
b) Find the median number of goals
c) Find the mode for the goals
6. Find the missing sides of triangle DEF. Assume that triangle ABC is similar to triangle DEF.

7. A computer is priced at $\$ 1,200$. If the sales tax rate is $8 \%$, find the total cost of the computer.

## Solutions

1. 40
2. $\frac{-10}{17}$
3. $x=4 \mathrm{~cm}, \mathrm{y}=3 \mathrm{~cm}$

Perimeter $=22 \mathrm{~cm}$
Area $=22 \mathrm{~cm}^{2}$
4. a. $x=$ length of longer side
b. $x+x-6=90$
c. 48 cm and 42 cm
5. a. 2.7 goals
b. 2.5 goals
c. 2 and 3
6. $x=5 \mathrm{~m}, \mathrm{y}=2.25 \mathrm{~m}$
7. $\$ 1296$

