Answer:

- 100% of the girls are expected to be normal, X+X+ and X+X-
- 50% of the boys are expected to be normal, X+Y
- 50% of the boys are expected to be hemophilic, X-Y
- 75% of the whole offspring normal (X+X+, X+X-, X+Y)
- 25% of the whole offspring hemophilic (X-Y)

Explanation:

Let us represent the **recessive allele** with the symbol **-**, and the **dominant allele** with the symbol **+**.

- **X-** is the chromosome carrying the recessive allele
- **X+** is the chromosome carrying the dominant allele

Situation: A phenotypically normal woman whose father was hemophiliac marries a normal man.

- **Hemophiliac father ⇒ X-Y**

The father could only provide the chromosome carrying the recessive allele to his daughter, **X-**. This means that the woman´s mother was normal, and she provided a chromosome with the dominant allele, **X+**. The woman is then heterozygous for the trait, X+X-.

- **Normal woman ⇒ X+ X-**
- **Normal man ⇒ X+Y**

Cross:
Parentals) X+X- x X+Y
Gametes) X+ X- X+ Y
Punnett square

	X+	X-
X+	X+X+	X+X-
Y	X+Y	X-Y

F1) 50% of the offspring is expected to be boys
50 % of the offspring is expected to be girls

Considering the whole progeny,
- 3/4 = 75% of individuals are expected to be normal (X+X+, X+X-, X+Y)
- 1/4 = 25% of individuals are expected to be hemophilic (X-Y)

Considering only girls,
- 2/2 = 100% of the girls are expected to be normal
- 1/2 = 50% of the girls are expected to be homozygous dominant, X+X+
- 1/2 = 50% of the girls are expected to be heterozygous, X+X-

Considering only boys,
- 1/2 = 50% of the boys are expected to be normal, X+Y
- 1/2 = 50% of the boys are expected to be hemophilic, X-Y