Figure 1.1 Payoff of the call option

> getwd()

[1] "C:/Users/tapud\_000/Documents"

> setwd("E:/Thesis- Evaluate European call options with exponential barriers/R")

> FPT=read.csv("ex1.csv")

> attach(FPT)

> FPT

Stock.price Payoff

1 0 -5

2 1 -5

3 2 -5

4 3 -5

5 4 -5

6 5 -5

7 6 -5

8 7 -5

9 8 -5

10 9 -5

11 10 -5

12 11 -5

13 12 -5

14 13 -5

15 14 -5

16 15 -5

17 16 -5

18 17 -5

19 18 -5

20 19 -5

21 20 -5

22 21 -5

23 22 -5

24 23 -5

25 24 -5

26 25 -5

27 26 -5

28 27 -5

29 28 -5

30 29 -5

31 30 -5

32 31 -5

33 32 -5

34 33 -5

35 34 -5

36 35 -5

37 36 -5

38 37 -5

39 38 -5

40 39 -5

41 40 -5

42 41 -5

43 42 -5

44 43 -5

45 44 -5

46 45 -5

47 46 -5

48 47 -5

49 48 -5

50 49 -5

51 50 -5

52 51 -4

53 52 -3

54 53 -2

55 54 -1

56 55 0

57 56 1

58 57 2

59 58 3

60 59 4

61 60 5

62 61 6

63 62 7

64 63 8

65 64 9

66 65 10

67 66 11

68 67 12

69 68 13

70 69 14

71 70 15

72 71 16

73 72 17

74 73 18

75 74 19

76 75 20

77 76 21

78 77 22

79 78 23

80 79 24

81 80 25

82 81 26

83 82 27

84 83 28

85 84 29

86 85 30

87 86 31

88 87 32

89 88 33

90 89 34

91 90 35

92 91 36

93 92 37

94 93 38

95 94 39

96 95 40

97 96 41

98 97 42

99 98 43

100 99 44

101 100 45

plot(Stock.price,Payoff,xlim=c(0,100),ylim = c(-10,60),type = "l",col="blue", xlab="Stock price", ylab = "Profit",main = "Profit diagram of a call option",lwd=1.5)

> lines(Stock.price,q,col="red",lwd=1.5)

> plot(Stock.price,Payoff,xlim=c(0,100),ylim = c(-10,60),type = "l",col="blue", ylab = "Profit",main = "Profit diagram of a call option",lwd=1.5, legend("topright", legend=c("Call, K = $50, A premium = $5"),col=("blue"), lty=1:2, cex=0.8))