

## Klapptest

Du solltest zunächst die Lösungen wegklappen (daher der Name Klapptest), so dass du beim Arbeiten **nur** die quadratische Gleichung siehst. Dann kannst du dir überlegen, wie sich die linke Seite faktorisieren lässt. Hier ein Beispiel:

$$x^2 + 21x + 110 = 0$$
$$(x + 10) \cdot (x + 11) = 0$$

Mit Hilfe des Satzes vom Nullprodukt, kann man dann die Lösungsmenge  $L = \{-10, -11\}$  bestimmen.

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1.	$x^2 + 14x + 49 = 0$	$L = \{7; 7\}$
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2.	$x^2 - 4x = 0$	$L = \{-4; 0\}$
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3.	$x^2 - 7x - 18 = 0$	$L = \{-9; 2\}$
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4.	$x^2 + 9x - 10 = 0$	$L = \{-1; 10\}$
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5.	$x^2 - 4x - 45 = 0$	$L = \{-9; 5\}$
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6.	$x^2 - 12x + 35 = 0$	$L = \{-7; -5\}$
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7.	$x^2 - 1x = 0$	$L = \{-1; 0\}$
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8.	$x^2 + 2x - 63 = 0$	$L = \{-7; 9\}$
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9.	$x^2 + 10x = 0$	$L = \{0; 10\}$
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10.	$x^2 - 11x + 30 = 0$	$L = \{-6; -5\}$
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11.  $x^2 + 16x + 64 = 0$   $L = \{8; 8\}$   
12.  $x^2 - 3x - 28 = 0$   $L = \{-7; 4\}$   
13.  $x^2 - 12x + 27 = 0$   $L = \{-9; -3\}$   
14.  $x^2 + 14x + 40 = 0$   $L = \{4; 10\}$   
15.  $x^2 - 8x - 20 = 0$   $L = \{-10; 2\}$

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16.  $x^2 - 2x - 63 = 0$   $L = \{-9; 7\}$   
17.  $x^2 + 19x + 90 = 0$   $L = \{9; 10\}$   
18.  $x^2 - 15x + 54 = 0$   $L = \{-9; -6\}$   
19.  $x^2 + 7x + 6 = 0$   $L = \{1; 6\}$   
20.  $x^2 - 4x - 12 = 0$   $L = \{-6; 2\}$

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21.  $x^2 + 3x = 0$   $L = \{0; 3\}$   
22.  $x^2 - 4x - 32 = 0$   $L = \{-8; 4\}$   
23.  $x^2 + 15x + 56 = 0$   $L = \{7; 8\}$   
24.  $x^2 + 7x + 10 = 0$   $L = \{2; 5\}$   
25.  $x^2 + 5x + 6 = 0$   $L = \{2; 3\}$

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26.  $x^2 - 8x - 9 = 0$   $L = \{-9; 1\}$   
27.  $x^2 - 17x + 70 = 0$   $L = \{-10; -7\}$   
28.  $x^2 - 2x = 0$   $L = \{-2; 0\}$   
29.  $x^2 + 6x + 9 = 0$   $L = \{3; 3\}$   
30.  $x^2 + 9x = 0$   $L = \{0; 9\}$

31.  $x^2 + 16x + 63 = 0$   $L = \{7; 9\}$   
32.  $x^2 - 16x + 63 = 0$   $L = \{-9; -7\}$   
33.  $x^2 + 13x + 30 = 0$   $L = \{3; 10\}$   
34.  $x^2 + 7x = 0$   $L = \{0; 7\}$   
35.  $x^2 - 7x - 8 = 0$   $L = \{-8; 1\}$
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36.  $x^2 - 12x + 20 = 0$   $L = \{-10; -2\}$   
37.  $x^2 - 2x - 35 = 0$   $L = \{-7; 5\}$   
38.  $x^2 + 12x + 35 = 0$   $L = \{5; 7\}$   
39.  $x^2 - 11x + 10 = 0$   $L = \{-10; -1\}$   
40.  $x^2 - 6x + 9 = 0$   $L = \{-3; -3\}$
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41.  $x^2 - 64 = 0$   $L = \{-8; 8\}$   
42.  $x^2 - 3x - 54 = 0$   $L = \{-9; 6\}$   
43.  $x^2 - 4x - 60 = 0$   $L = \{-10; 6\}$   
44.  $x^2 - 9x + 18 = 0$   $L = \{-6; -3\}$   
45.  $x^2 + 4x + 3 = 0$   $L = \{1; 3\}$
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46.  $x^2 + 2x - 24 = 0$   $L = \{-4; 6\}$   
47.  $x^2 + 18x + 80 = 0$   $L = \{8; 10\}$   
48.  $x^2 - 8x = 0$   $L = \{-8; 0\}$   
49.  $x^2 - 1x - 20 = 0$   $L = \{-5; 4\}$   
50.  $x^2 - 9x + 20 = 0$   $L = \{-5; -4\}$
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51.  $x^2 - 3x - 4 = 0$   $L = \{-4; 1\}$   
52.  $x^2 + 1x - 6 = 0$   $L = \{-2; 3\}$   
53.  $x^2 - 2x - 8 = 0$   $L = \{-4; 2\}$   
54.  $x^2 + 1x - 2 = 0$   $L = \{-1; 2\}$   
55.  $x^2 + 6x + 8 = 0$   $L = \{2; 4\}$
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56.  $x^2 + 2x - 35 = 0$   $L = \{-5; 7\}$   
57.  $x^2 - 3x = 0$   $L = \{-3; 0\}$   
58.  $x^2 - 10x + 16 = 0$   $L = \{-8; -2\}$   
59.  $x^2 - 15x + 50 = 0$   $L = \{-10; -5\}$   
60.  $x^2 + 3x - 54 = 0$   $L = \{-6; 9\}$
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61.  $x^2 - 7x + 12 = 0$   $L = \{-4; -3\}$   
62.  $x^2 - 6x + 5 = 0$   $L = \{-5; -1\}$   
63.  $x^2 + 3x - 18 = 0$   $L = \{-3; 6\}$   
64.  $x^2 + 13x + 42 = 0$   $L = \{6; 7\}$   
65.  $x^2 - 11x + 28 = 0$   $L = \{-7; -4\}$
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66.  $x^2 - 2x - 80 = 0$   $L = \{-10; 8\}$   
67.  $x^2 + 11x + 10 = 0$   $L = \{1; 10\}$   
68.  $x^2 + 3x + 2 = 0$   $L = \{1; 2\}$   
69.  $x^2 - 9x + 8 = 0$   $L = \{-8; -1\}$   
70.  $x^2 - 25 = 0$   $L = \{-5; 5\}$
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71.  $x^2 + 18x + 81 = 0$   $L = \{9; 9\}$

72.  $x^2 - 4x + 3 = 0$   $L = \{-3; -1\}$

73.  $x^2 - 6x - 7 = 0$   $L = \{-7; 1\}$

74.  $x^2 + 1x - 42 = 0$   $L = \{-6; 7\}$

75.  $x^2 + 16x + 60 = 0$   $L = \{6; 10\}$

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76.  $x^2 - 6x - 27 = 0$   $L = \{-9; 3\}$

77.  $x^2 + 6x = 0$   $L = \{0; 6\}$

78.  $x^2 + 10x + 9 = 0$   $L = \{1; 9\}$

79.  $x^2 + 8x = 0$   $L = \{0; 8\}$

80.  $x^2 - 8x + 15 = 0$   $L = \{-5; -3\}$

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81.  $x^2 - 4x - 21 = 0$   $L = \{-7; 3\}$

82.  $x^2 - 1x - 42 = 0$   $L = \{-7; 6\}$

83.  $x^2 + 5x - 14 = 0$   $L = \{-2; 7\}$

84.  $x^2 - 2x - 24 = 0$   $L = \{-6; 4\}$

85.  $x^2 - 1x - 72 = 0$   $L = \{-9; 8\}$

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86.  $x^2 - 3x - 40 = 0$   $L = \{-8; 5\}$

87.  $x^2 + 1x - 20 = 0$   $L = \{-4; 5\}$

88.  $x^2 + 2x - 48 = 0$   $L = \{-6; 8\}$

89.  $x^2 - 8x + 16 = 0$   $L = \{-4; -4\}$

90.  $x^2 + 2x - 8 = 0$   $L = \{-2; 4\}$

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91.  $x^2 - 3x + 2 = 0$   $L = \{-2; -1\}$

92.  $x^2 + 2x - 80 = 0$   $L = \{-8; 10\}$

93.  $x^2 - 1x - 90 = 0$   $L = \{-10; 9\}$

94.  $x^2 + 17x + 70 = 0$   $L = \{7; 10\}$

95.  $x^2 - 7x - 30 = 0$   $L = \{-10; 3\}$

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96.  $x^2 - 1x - 6 = 0$   $L = \{-3; 2\}$

97.  $x^2 + 7x - 30 = 0$   $L = \{-3; 10\}$

98.  $x^2 + 12x + 27 = 0$   $L = \{3; 9\}$

99.  $x^2 + 9x + 14 = 0$   $L = \{2; 7\}$

100.  $x^2 + 15x + 54 = 0$   $L = \{6; 9\}$

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101.  $x^2 + 5x - 24 = 0$   $L = \{-3; 8\}$

102.  $x^2 + 1x - 30 = 0$   $L = \{-5; 6\}$

103.  $x^2 + 6x - 40 = 0$   $L = \{-4; 10\}$

104.  $x^2 - 15x + 56 = 0$   $L = \{-8; -7\}$

105.  $x^2 - 9 = 0$   $L = \{-3; 3\}$

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106.  $x^2 - 3x - 18 = 0$   $L = \{-6; 3\}$

107.  $x^2 + 3x - 10 = 0$   $L = \{-2; 5\}$

108.  $x^2 - 13x + 36 = 0$   $L = \{-9; -4\}$

109.  $x^2 - 9x + 14 = 0$   $L = \{-7; -2\}$

110.  $x^2 - 7x = 0$   $L = \{-7; 0\}$

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111.  $x^2 + 5x - 6 = 0$   $L = \{-1; 6\}$

112.  $x^2 - 10x + 25 = 0$   $L = \{-5; -5\}$

113.  $x^2 + 6x - 16 = 0$   $L = \{-2; 8\}$

114.  $x^2 - 14x + 45 = 0$   $L = \{-9; -5\}$

115.  $x^2 + 15x + 50 = 0$   $L = \{5; 10\}$

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116.  $x^2 - 11x + 18 = 0$   $L = \{-9; -2\}$

117.  $x^2 + 3x - 70 = 0$   $L = \{-7; 10\}$

118.  $x^2 - 1x - 30 = 0$   $L = \{-6; 5\}$

119.  $x^2 - 10x + 9 = 0$   $L = \{-9; -1\}$

120.  $x^2 + 5x + 4 = 0$   $L = \{1; 4\}$

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121.  $x^2 - 14x + 49 = 0$   $L = \{-7; -7\}$

122.  $x^2 - 17x + 72 = 0$   $L = \{-9; -8\}$

123.  $x^2 + 5x - 36 = 0$   $L = \{-4; 9\}$

124.  $x^2 + 3x - 28 = 0$   $L = \{-4; 7\}$

125.  $x^2 - 19x + 90 = 0$   $L = \{-10; -9\}$

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126.  $x^2 + 4x = 0$   $L = \{0; 4\}$

127.  $x^2 - 3x - 10 = 0$   $L = \{-5; 2\}$

128.  $x^2 + 5x = 0$   $L = \{0; 5\}$

129.  $x^2 + 12x + 20 = 0$   $L = \{2; 10\}$

130.  $x^2 - 49 = 0$   $L = \{-7; 7\}$

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131.  $x^2 - 18x + 80 = 0$   $L = \{-10; -8\}$

132.  $x^2 - 4x - 5 = 0$   $L = \{-5; 1\}$

133.  $x^2 + 11x + 18 = 0$   $L = \{2; 9\}$

134.  $x^2 + 9x + 8 = 0$   $L = \{1; 8\}$

135.  $x^2 + 14x + 45 = 0$   $L = \{5; 9\}$

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136.  $x^2 + 12x + 36 = 0$   $L = \{6; 6\}$

137.  $x^2 - 16 = 0$   $L = \{-4; 4\}$

138.  $x^2 - 1x - 2 = 0$   $L = \{-2; 1\}$

139.  $x^2 + 7x - 8 = 0$   $L = \{-1; 8\}$

140.  $x^2 - 18x + 81 = 0$   $L = \{-9; -9\}$

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141.  $x^2 + 17x + 72 = 0$   $L = \{8; 9\}$

142.  $x^2 + 8x + 7 = 0$   $L = \{1; 7\}$

143.  $x^2 - 13x + 42 = 0$   $L = \{-7; -6\}$

144.  $x^2 - 7x + 10 = 0$   $L = \{-5; -2\}$

145.  $x^2 - 1x - 12 = 0$   $L = \{-4; 3\}$

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146.  $x^2 + 4x - 12 = 0$   $L = \{-2; 6\}$

147.  $x^2 - 6x + 8 = 0$   $L = \{-4; -2\}$

148.  $x^2 + 1x - 12 = 0$   $L = \{-3; 4\}$

149.  $x^2 - 6x - 16 = 0$   $L = \{-8; 2\}$

150.  $x^2 - 81 = 0$   $L = \{-9; 9\}$

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151.  $x^2 - 100 = 0$   $L = \{-10; 10\}$

152.  $x^2 + 2x = 0$   $L = \{0; 2\}$

153.  $x^2 + 8x + 12 = 0$   $L = \{2; 6\}$

154.  $x^2 - 5x - 6 = 0$   $L = \{-6; 1\}$

155.  $x^2 + 6x - 27 = 0$   $L = \{-3; 9\}$

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156.  $x^2 + 4x - 5 = 0$   $L = \{-1; 5\}$

157.  $x^2 + 3x - 4 = 0$   $L = \{-1; 4\}$

158.  $x^2 - 10x + 24 = 0$   $L = \{-6; -4\}$

159.  $x^2 + 1x - 72 = 0$   $L = \{-8; 9\}$

160.  $x^2 + 10x + 21 = 0$   $L = \{3; 7\}$

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161.  $x^2 - 6x - 40 = 0$   $L = \{-10; 4\}$

162.  $x^2 + 8x + 16 = 0$   $L = \{4; 4\}$

163.  $x^2 + 4x - 32 = 0$   $L = \{-4; 8\}$

164.  $x^2 + 12x + 32 = 0$   $L = \{4; 8\}$

165.  $x^2 - 16x + 60 = 0$   $L = \{-10; -6\}$

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166.  $x^2 + 4x + 4 = 0$   $L = \{2; 2\}$

167.  $x^2 - 2x - 3 = 0$   $L = \{-3; 1\}$

168.  $x^2 + 10x + 24 = 0$   $L = \{4; 6\}$

169.  $x^2 - 1x - 56 = 0$   $L = \{-8; 7\}$

170.  $x^2 + 2x - 15 = 0$   $L = \{-3; 5\}$

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171.  $x^2 + 7x + 12 = 0$   $L = \{3; 4\}$

172.  $x^2 + 2x + 1 = 0$   $L = \{1; 1\}$

173.  $x^2 - 10x + 21 = 0$   $L = \{-7; -3\}$

174.  $x^2 + 4x - 21 = 0$   $L = \{-3; 7\}$

175.  $x^2 - 13x + 30 = 0$   $L = \{-10; -3\}$

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176.  $x^2 - 1 = 0$   $L = \{-1; 1\}$

177.  $x^2 - 7x + 6 = 0$   $L = \{-6; -1\}$

178.  $x^2 - 5x + 6 = 0$   $L = \{-3; -2\}$

179.  $x^2 + 8x - 20 = 0$   $L = \{-2; 10\}$

180.  $x^2 - 12x + 36 = 0$   $L = \{-6; -6\}$

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181.  $x^2 + 1x - 90 = 0$   $L = \{-9; 10\}$

182.  $x^2 + 13x + 36 = 0$   $L = \{4; 9\}$

183.  $x^2 - 36 = 0$   $L = \{-6; 6\}$

184.  $x^2 - 9x - 10 = 0$   $L = \{-10; 1\}$

185.  $x^2 - 16x + 64 = 0$   $L = \{-8; -8\}$

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186.  $x^2 + 10x + 16 = 0$   $L = \{2; 8\}$

187.  $x^2 - 12x + 32 = 0$   $L = \{-8; -4\}$

188.  $x^2 - 8x + 12 = 0$   $L = \{-6; -2\}$

189.  $x^2 + 11x + 24 = 0$   $L = \{3; 8\}$

190.  $x^2 - 2x - 48 = 0$   $L = \{-8; 6\}$

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191.	$x^2 + 13x + 40 = 0$	$L = \{5; 8\}$
192.	$x^2 - 3x - 70 = 0$	$L = \{-10; 7\}$
193.	$x^2 + 6x - 7 = 0$	$L = \{-1; 7\}$
194.	$x^2 + 1x - 56 = 0$	$L = \{-7; 8\}$
195.	$x^2 - 2x - 15 = 0$	$L = \{-5; 3\}$

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196.	$x^2 + 11x + 28 = 0$	$L = \{4; 7\}$
197.	$x^2 - 13x + 40 = 0$	$L = \{-8; -5\}$
198.	$x^2 - 4 = 0$	$L = \{-2; 2\}$
199.	$x^2 + 9x + 18 = 0$	$L = \{3; 6\}$
200.	$x^2 - 5x + 4 = 0$	$L = \{-4; -1\}$

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201.	$x^2 + 14x + 48 = 0$	$L = \{6; 8\}$
202.	$x^2 + 4x - 45 = 0$	$L = \{-5; 9\}$
203.	$x^2 - 20x + 100 = 0$	$L = \{-10; -10\}$
204.	$x^2 - 4x + 4 = 0$	$L = \{-2; -2\}$
205.	$x^2 - 5x = 0$	$L = \{-5; 0\}$

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206.	$x^2 + 20x + 100 = 0$	$L = \{10; 10\}$
207.	$x^2 + 4x - 60 = 0$	$L = \{-6; 10\}$
208.	$x^2 - 5x - 50 = 0$	$L = \{-10; 5\}$
209.	$x^2 - 5x - 36 = 0$	$L = \{-9; 4\}$
210.	$x^2 - 2x + 1 = 0$	$L = \{-1; -1\}$

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211.	$x^2 - 14x + 40 = 0$	$L = \{-10; -4\}$
212.	$x^2 + 8x - 9 = 0$	$L = \{-1; 9\}$
213.	$x^2 - 11x + 24 = 0$	$L = \{-8; -3\}$
214.	$x^2 - 5x - 24 = 0$	$L = \{-8; 3\}$
215.	$x^2 + 10x + 25 = 0$	$L = \{5; 5\}$

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216.	$x^2 - 14x + 48 = 0$	$L = \{-8; -6\}$
217.	$x^2 + 1x = 0$	$L = \{0; 1\}$
218.	$x^2 + 6x + 5 = 0$	$L = \{1; 5\}$
219.	$x^2 + 3x - 40 = 0$	$L = \{-5; 8\}$
220.	$x^2 + 7x - 18 = 0$	$L = \{-2; 9\}$

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221.	$x^2 - 8x + 7 = 0$	$L = \{-7; -1\}$
222.	$x^2 + 9x + 20 = 0$	$L = \{4; 5\}$
223.	$x^2 + 2x - 3 = 0$	$L = \{-1; 3\}$
224.	$x^2 - 10x = 0$	$L = \{-10; 0\}$
225.	$x^2 + 5x - 50 = 0$	$L = \{-5; 10\}$

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226.	$x^2 + 11x + 30 = 0$	$L = \{5; 6\}$
227.	$x^2 - 5x - 14 = 0$	$L = \{-7; 2\}$
228.	$x^2 - 9x = 0$	$L = \{-9; 0\}$
229.	$x^2 - 6x = 0$	$L = \{-6; 0\}$
230.	$x^2 + 8x + 15 = 0$	$L = \{3; 5\}$