L3 Az $x^2 = a$, $a \in \mathbb{R}$ alakú egyenlet (60. oldal)

1. **a)** $S = \{25\}$; **b)** $S = \{16\}$; **c)** $S = \{20\}$; **d)** $S = \{7\}$; **e)** $S = \{5\}$; **f)** $S = \varnothing$.

2. **a)** (16, 4); (81, 9); (400, 20); **b)** (25, –5); (25, 5); (49, –7); (49, 7); (144, –12); (144, 12);
c) (16, –4); (81, –9); (400, –20).

3. **a)** $S = \{-6; 6\}$; **b)** $S = \{-1{,}8; 1{,}8\}$; **c)** $S = \left\{-\frac{5}{2}; \frac{5}{2}\right\}$; **d)** $S = \varnothing$; **e)** $S = \{-30; 30\}$; **f)** $S = \{-2\sqrt{5}; 2\sqrt{5}\}$.

4. **a)** $S = \{-8; 8\}$; **b)** $S = \left\{-\frac{2}{3}; \frac{2}{3}\right\}$; **c)** $S = \left\{-\frac{2}{3}; \frac{8}{3}\right\}$; **d)** $S = \{-30; 30\}$; **e)** $S = \left\{-\frac{7}{2}; \frac{7}{2}\right\}$; **f)** $S = \{-4; 5\}$.

5. **a)** $S = \{7\}$; **b)** $S = \{7\sqrt{2}\}$.

6. **a)** $S = \{-6\}$; **b)** $S = \{-1\}$.

7. **a)** $S = \{-6; 6\}$; **b)** $S = \{-1; 1\}$.

8. **a)** $S = \{-\sqrt{5}; \sqrt{5}\}$. **b)** $S = \left\{-\frac{\sqrt{2}}{2}; \frac{\sqrt{2}}{2}\right\}$; **c)** $S = \{0\}$; **d)** $S = \left\{-\frac{1}{3}; \frac{1}{3}\right\}$; **e)** $S = \varnothing$; **f)** $S = \left\{-\frac{\sqrt{3}}{2}; \frac{\sqrt{3}}{2}\right\}$.

9. **a)** $S \subset \mathbb{Q}$, $p = \frac{4}{7}$; **b)** $S \subset \mathbb{Z}$, $p = \frac{2}{7}$; **c)** $S \subset \mathbb{R}$, $p = \frac{5}{7}$; **d)** card $(S \cap \mathbb{R}) = 1$, $p = \frac{1}{7}$

10. $CD = x$, $BC = 2x$, $AB = 4x$.
Az $x^2 + 4x^2 + 16x^2 = 756$ egyenletet kapjuk. $AB = 24$ m, $BC = 12$ m, $CD = 6$ m.