## Solve Quadratic Equations by Factoring

Solve the following by factoring:

1. $x^{2}+3=4 x$
2. $2 x^{2}+x=6$
3. $x^{2}-x=0$
4. $6 x^{2}=1-x$
5. $x^{2}-12=4 x$
6. $x^{2}+6 x+9=0$
7. $x^{2}-25=0$
8. $6-7 x=3 x^{2}$
9. $2 x^{2}-20 x+42=0$
10. $4 x^{2}-1=0$
11. $12+24 x^{2}-34 x=0 \quad$ 12. $x^{2}-9=8 x$
12. The area of a rectangular floor is described by the equation

$$
w(w-9)=252
$$

Where w is the width of the floor in meters. What is the width of the floor?

