

**Aufgabe 1**

$$k: y = 5x^2 + 2x + 9$$

$$y \rightarrow -y$$

$$k': -y = 5x^2 + 2x + 9$$

$$k': y = -5x^2 - 2x - 9$$

**Aufgabe 2**

$$k: y = 5x^2 + 4x + 6$$

$$x \rightarrow -x$$

$$k': y = 5(-x)^2 + 4(-x) + 6$$

$$k': y = 5x^2 - 4x + 6$$

**Aufgabe 3**

$$k: y = 5x^2 - 3x + 2$$

$$x \rightarrow x + 3$$

$$k': y = 5(x + 3)^2 - 3(x + 3) + 2$$

$$k': y = 5x^2 + 27x + 38$$

**Aufgabe 4**

$$k: y = 5x^2 - 4x - 1$$

$$y \rightarrow y - 4$$

$$k': y - 4 = 5x^2 - 4x - 1$$

$$k': y = 5x^2 - 4x + 3$$

**Aufgabe 5**

$$k: y = 5x^2 - 4x + 4$$

$$x \rightarrow 3x$$

$$k': y = 5(3x)^2 - 4(3x) + 4$$

$$k': y = 45x^2 - 12x + 4$$

### Aufgabe 6

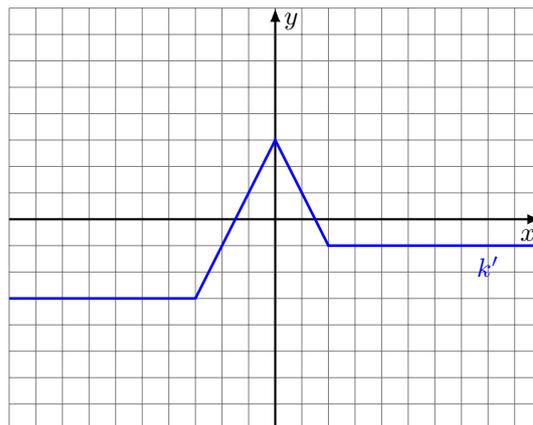
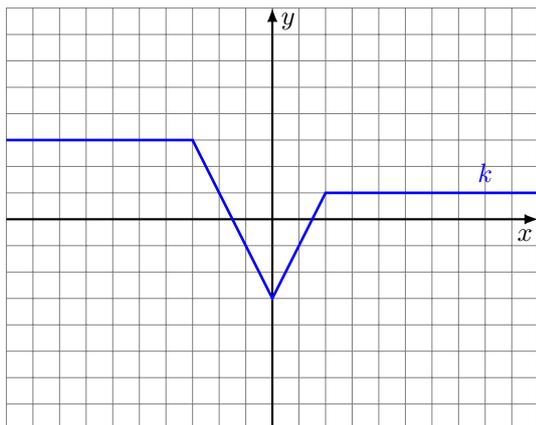
$$k: y = 5x^2 + 5x + 1$$

$$y \rightarrow 2y$$

$$k': 2y = 5x^2 + 5x + 1$$

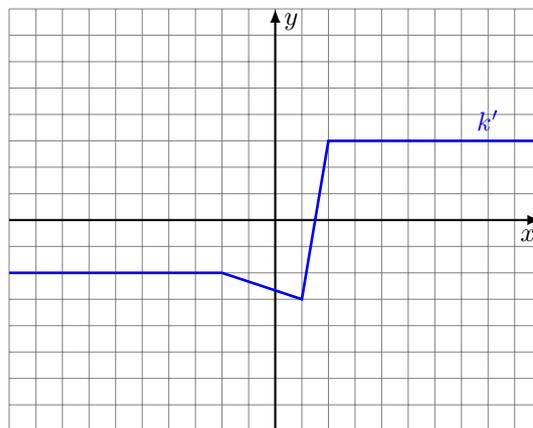
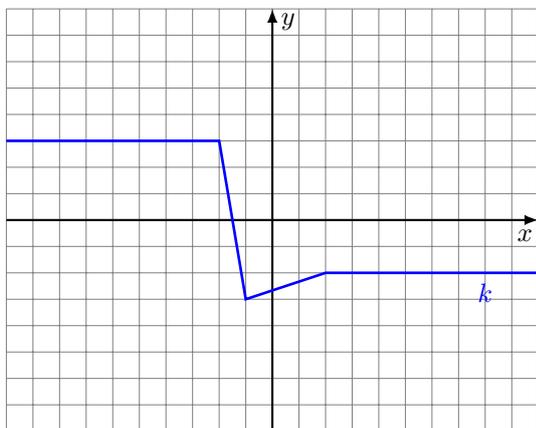
$$k': y = \frac{5}{2}x^2 + \frac{5}{2}x + \frac{1}{2}$$

### Aufgabe 7



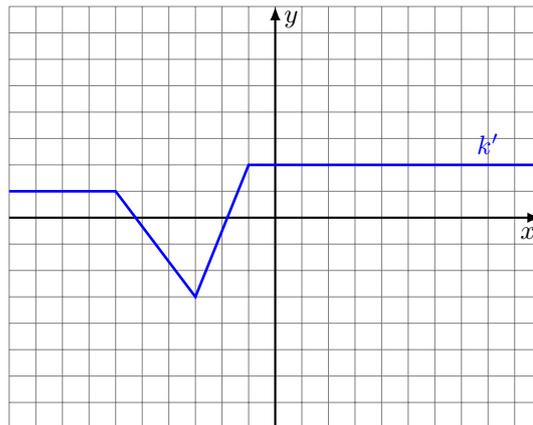
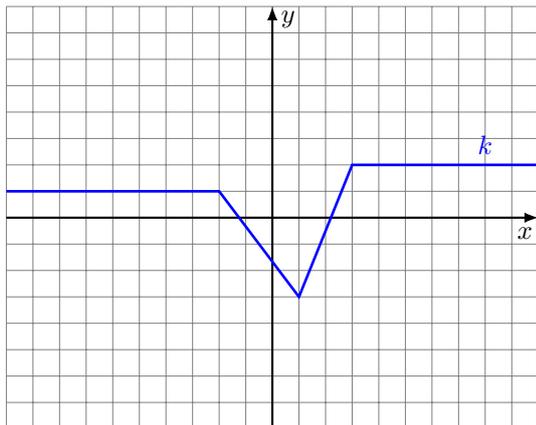
Spiegelung an der  $x$ -Achse:  $y \rightarrow -y$

### Aufgabe 8



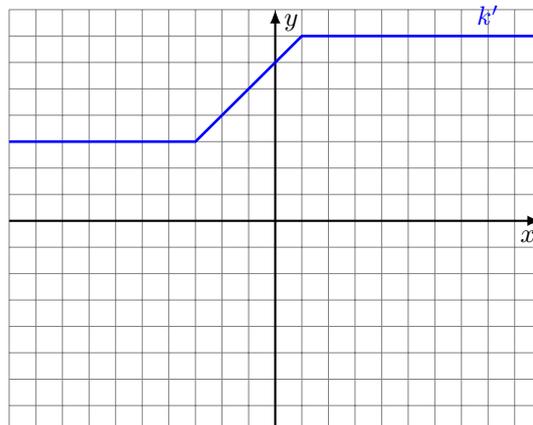
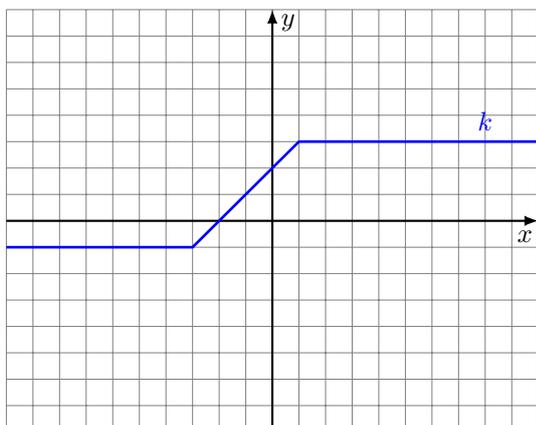
Spiegelung an der  $y$ -Achse:  $x \rightarrow -x$

### Aufgabe 9



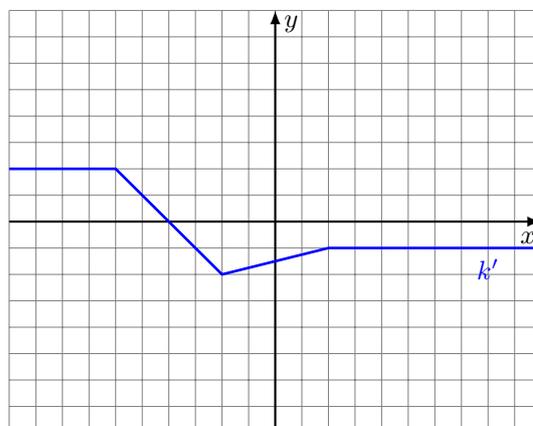
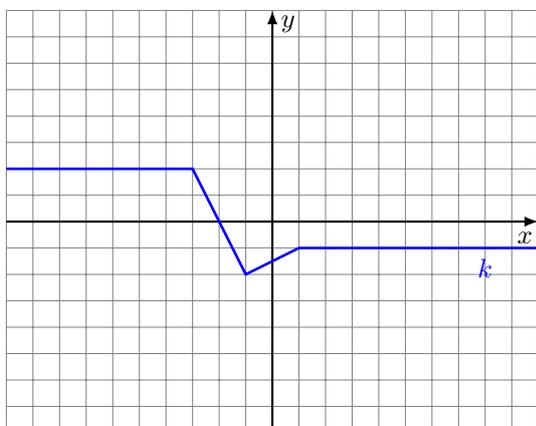
Translation in  $x$ -Richtung:  $x \rightarrow x + 4$

### Aufgabe 10



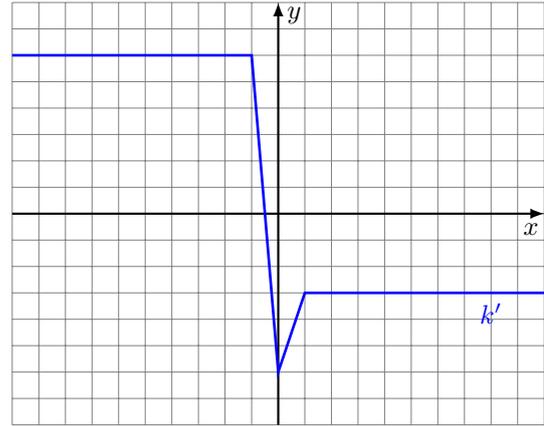
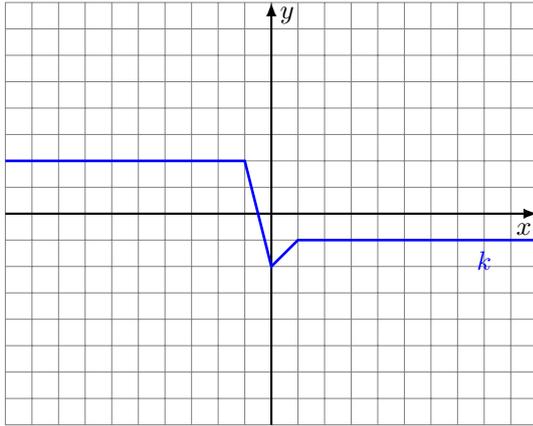
Translation in  $y$ -Richtung:  $y \rightarrow y + 4$

### Aufgabe 11



axiale Streckung in  $x$ -Richtung mit Faktor  $k = 2$ :  $x \rightarrow \frac{1}{2}x$

## Aufgabe 12



axiale Streckung in  $y$ -Richtung mit Faktor  $k = 3$ :  $y \rightarrow \frac{1}{3}y$