

A. Verschuivingen, spiegelingen en rotaties

## 1. Spiegelingen

# $S_g(A) = \text{Spiegeling van } S \text{ ten opzichte van } g$

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Interactieve Oefening



$S_k(Q) =$	$S_g(I) =$	$S_k(K) =$	$S_h(D) =$	$S_m(F) =$
$S_k([IJ]) =$	$S_n([AR]) =$	$S_h([QJ]) =$	$S_k([BL]) =$	$S_k(\Delta BTL) =$

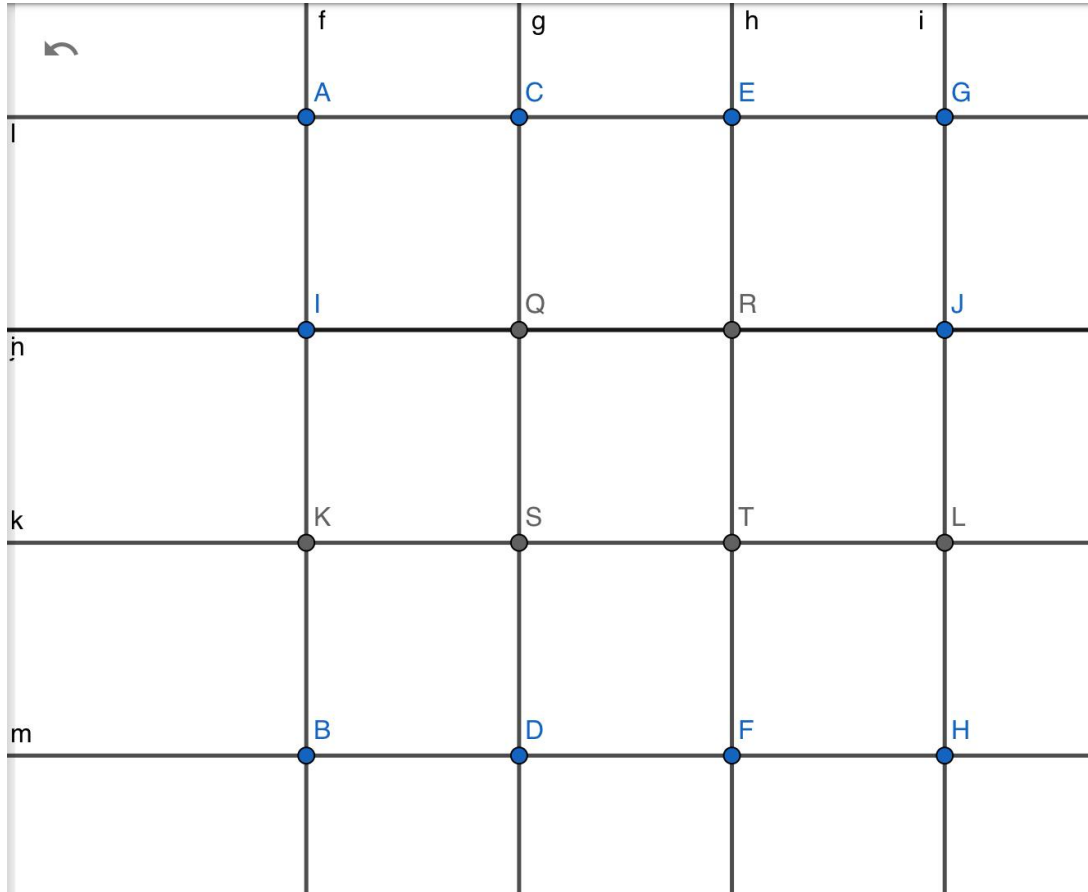
## 2. Verschuivingen

$t_{BD}^{\rightarrow}(s) = \text{verschuiving van } S \text{ volgens richting } BD$

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$t_{BD}^{\rightarrow}(T) =$	$t_{SD}^{\rightarrow}(G) =$	$t_{DT}^{\rightarrow}(I) =$	$t_{BS}^{\rightarrow}(T) =$	$t_{HK}^{\rightarrow}(J) =$
$t_{BD}^{\rightarrow}([KQ]) =$	$t_{TH}^{\rightarrow}([IQ]) =$	$t_{BQ}^{\rightarrow}([SF]) =$	$t_{AQ}^{\rightarrow}([KI]) =$	$t_{DT}^{\rightarrow}(\Delta BKS) =$

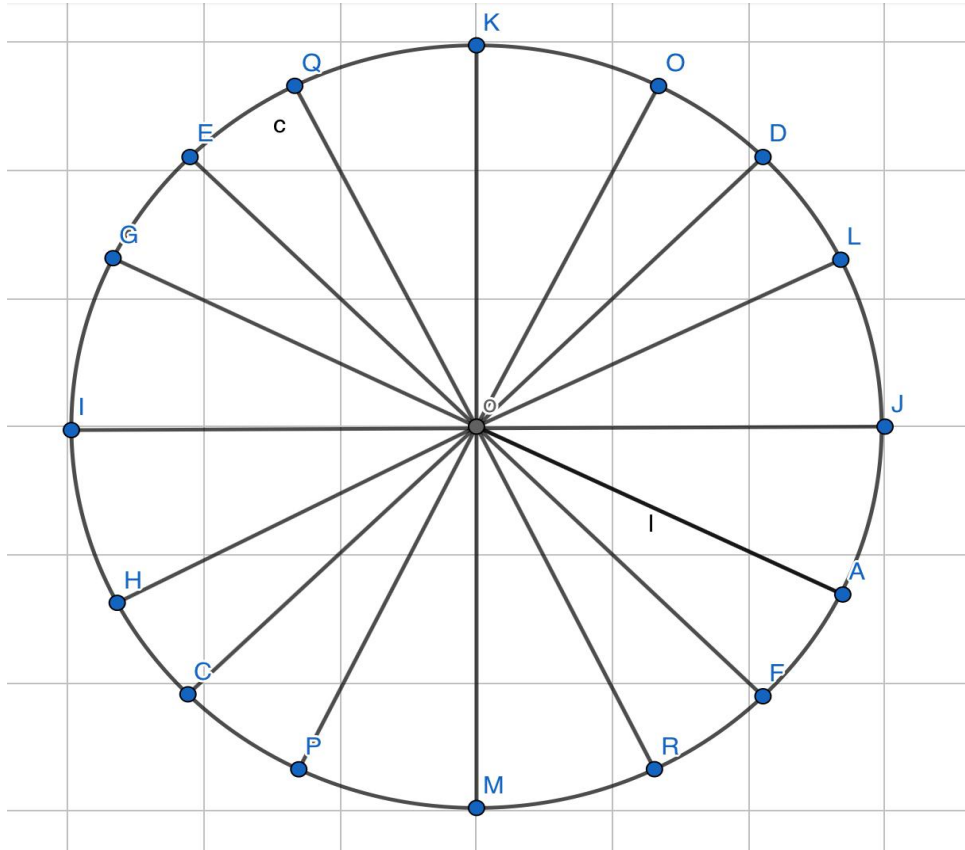
### 3. Rotaties

$r_{(m,\alpha)}(A) = \text{Rotatie van } A \text{ rond } m \text{ over hoek } \alpha$

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$r_{(0,45^\circ)}(C) =$	$r_{(0,-60^\circ)}(I) =$	$r_{(0,30^\circ)}(P) =$	$r_{(0,90^\circ)}(H) =$	$r_{(0,-45^\circ)}(O) =$
$r_{(0,120^\circ)}(H) =$	$r_{(0,180^\circ)}(G) =$	$r_{(0,-90^\circ)}(Q) =$	$r_{(0,-15^\circ)}(D) =$	$r_{(0,-30^\circ)}(P) =$

## A. Transformaties van het vlak

1. spiegeling ten opzichte van x-as

$$s_x(a, b) = (a, -b)$$

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$s_x(2, 6) =$

$s_x(-2, -1) =$

$s_x(-1, 5) =$

$s_x(0, 3) =$

2. spiegeling ten opzichte van y-as

$$s_y(a, b) = (-a, b)$$

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$s_y(2, 3) =$

$s_y(-2, -1) =$

$s_y(-1, 5) =$

$s_y(0, -3) =$

3. spiegeling ten opzichte van de oorsprong

$$s_o(a, b) = (-a, -b)$$

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$s_o(2, 3) =$

$s_o(-2, 1) =$

$s_o(-1, -5) =$

$s_o(0, -3) =$



4. Rotatie over +90 graden rond oorsprong

$$s_{+90^\circ}(a, b) = (-b, a)$$

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Interactieve Oefening



$s_{+90^\circ}(2, 3) =$

$s_{+90^\circ}(-2, 1) =$

$s_{+90^\circ}(-1, -5) =$

$s_{+90^\circ}(0, -3) =$

5. Rotatie over -90 graden rond oorsprong

$$s_{-90^\circ}(a, b) = (b, -a)$$

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$s_{-90^\circ}(2, -3) =$

$s_{-90^\circ}(-2, -1) =$

$s_{-90^\circ}(-1, -5) =$

$s_{-90^\circ}(0, -3) =$

6. spiegeling ten opzichte van 1ste bissectrice

$$s_a(a, b) = (b, a)$$

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$s_a(2, 3) =$

$s_a(-2, 1) =$

$s_a(1, -5) =$

$s_a(0, -3) =$

7. spiegeling ten opzichte van 2de bissectrice

$$s_b(a, b) = (-b, -a)$$

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Interactieve Oefening



$s_b(-2, 3) =$

$s_b(-2, -1) =$

$s_b(-1, -5) =$

$s_b(0, -3) =$

