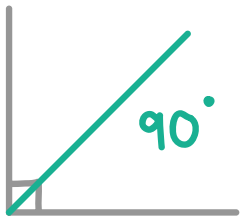
ONTSYFER
WISKUNDE ONDERSTEUNING

Gr 8 Wiskunde / Mathematics

Meetkunde / Geometry (2)

1. Hoeke / Angles



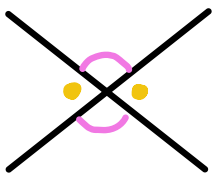
- **Komplementêre hoeke**
  Hoeke is saam = 90°
- **Complementary Angles**
  Angles form 90°

Kompl ...

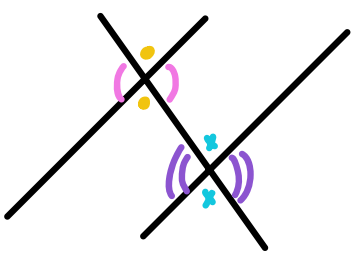
- **Supplementêre hoeke**
  Hoeke is saam = 180°
- **Supplementary angles**
  Angles form 180°

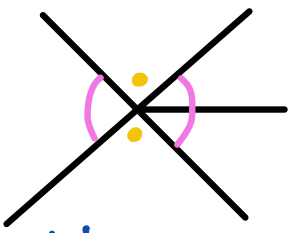
Suppl ...

2. Regoorstaande hoeke / Opposite angles



Lyne kruis mekaar

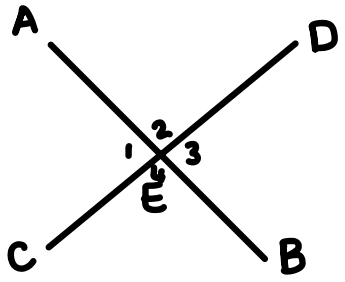




Lines cross each other.

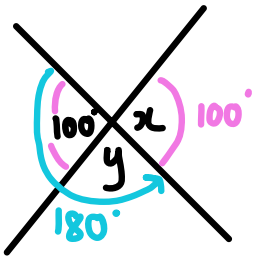
8.3.13

②

1. 

$\hat{E}_1 = \hat{E}_3$ "Regoorst Le"

$\hat{E}_2 = \hat{E}_4$ "Opposite angles"

2. 

Wat sien jy? Reguitlyne en Regoorst Le
What do you see? Straight lines and opposite angles.

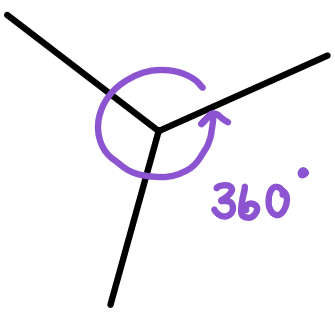
- $x = 100°$ Regoorst Le / Opposite angles
(write on diagram / skryf op diagram)

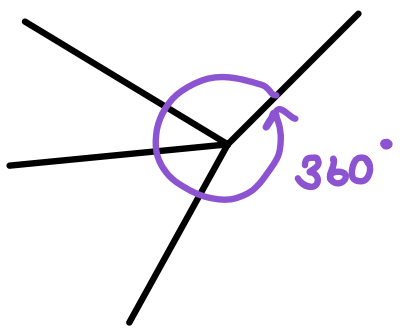
- $y + 100° = 180°$ Le op reguitlyn / Angles on straight line
$y = 180° - 100°$
$y = 80°$

3. Hoeke om 'n punt / Angles around a point

↳ Ek los die een vir laaste, as daar "awk-ward" lyne is.
(Lyne wat "knak")

↳ I leave this one for last, when there are "awkward" lines.
(Lines that bend)





8.3.13

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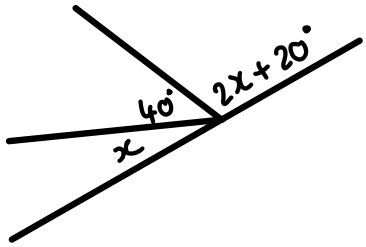
Oef 1 Ex

Bereken die onbekendes / Calculate the variables

1.



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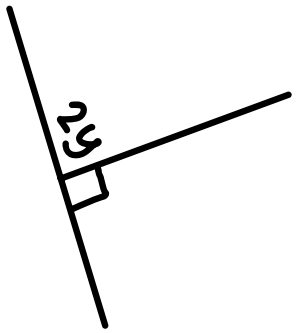
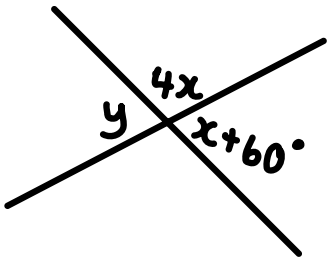


3.



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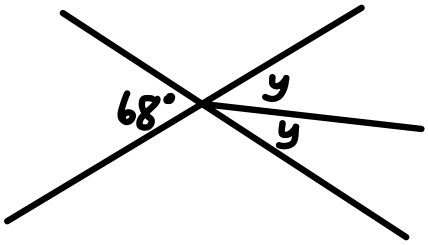
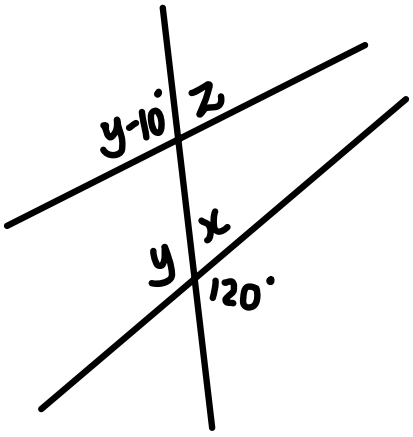
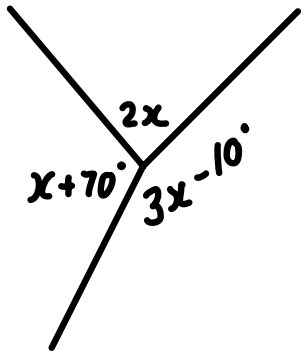


5.



6.



8.3.13

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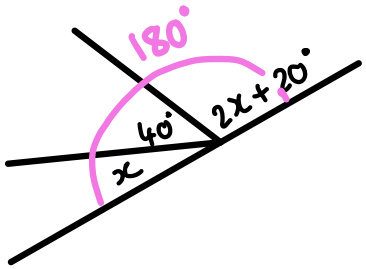
Memorandum

1.



Wat sien jy?
Reguitlyn = 180° (Plus alles)

What do you see?
Straight line = 180° (Add all)

$x + 40° + 2x + 20° = 180°$

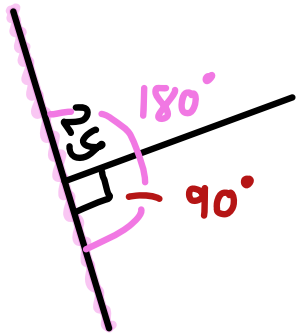
Hoeke op 'n reguitlyn
Angles on a straight line

$3x = 180° - 40° - 20°$

$\frac{3x}{3} = \frac{120°}{3}$

$x = 40°$

2.



Wat sien jy?
Reguitlyn = 180°
90° hoek

What do you see?
Straight line = 180°
90° angle

$2y + 90° = 180°$

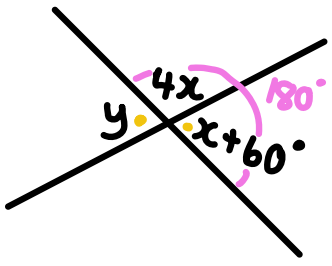
Hoeke op 'n reguitlyn
Angles on a straight line

$2y = 180° - 90$

$\frac{2y}{2} = \frac{90°}{2}$

$y = 45°$

3.



Wat sien jy?
Reguitlyn = 180°
Regoorst Le

What do you see?
Straight line = 180°
Opposite angles

8.3.13

(5)

$4x + x + 60^\circ = 180^\circ$

Hoeke op 'n reguitlyn
Angles on a straight line

$5x = 180^\circ - 60^\circ$

$\frac{5x}{5} = \frac{120^\circ}{5}$

$x = 24^\circ$

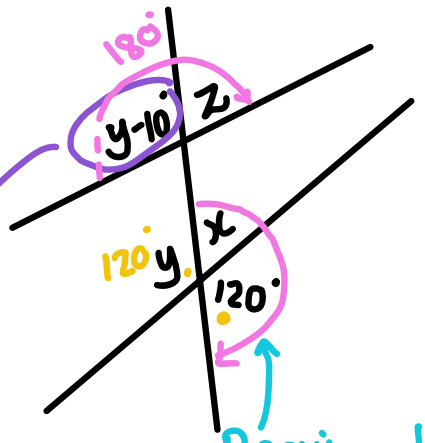
$y = x + 60^\circ$

$y = 24^\circ + 60^\circ$

$y = 84^\circ$

Regoorst Le / Opposite angles

5.



Wat sien jy?
Reguitlyne = 180°
Regoorst Le

What do you see?
Straight lines = 180°
Opposite angles

Begin by hoek wat gegee is.
Start with the angle that is given.

$y = 120^\circ$

Regoorst Le / Opposite angles

$x + 120^\circ = 180^\circ$

$x = 180^\circ - 120^\circ$

$x = 60^\circ$

Hoeke op 'n reguitlyn
Angles on a straight line

$y - 10^\circ + z = 180^\circ$

$120^\circ - 10^\circ + z = 180^\circ$

$z = 180^\circ - 120^\circ + 10^\circ$

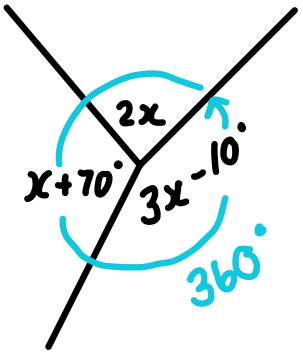
$z = 70^\circ$

Hoeke op 'n reguitlyn
Angles on a straight line

8.3.13

⑥

6.



Wat sien jy?
Hoeke om 'n punt = 360°

What do you see?
Angles around a point = 360°

$2x + x + 70^\circ + 3x - 10^\circ = 360^\circ$

Hoeke om 'n punt
Angles around a point

$6x = 360^\circ - 70^\circ + 10^\circ$

$\frac{6x}{6} = \frac{300^\circ}{6}$

$x = 50^\circ$