

Memorandum
Grade 10
Wisk V2 - November

1.11 92 ✓ (1)

1.12 $\frac{2 \times 37 + 6 \times 23 + 10 \times 9 + 14 \times 17 + 18 \times 5 + 20 \times 1}{92} \checkmark$
 $= \frac{652}{92} = 7,09 \text{ dae} \checkmark$ (3)

1.13 $0 \leq x < 4 \checkmark$ (1)
 1.14 $8 \leq x < 12 \checkmark$ (1)

1.21 3, 5, 6, 8, 8, 9, 10, 12, 13, 14, 15, 15, 16, 17, 17, 18, 20, 20, 21, 23, 36
 3, 15 ✓ (2)

1.22 $Q_1 = 8,5 \checkmark$
 $Q_3 = 19 \checkmark$
 $\frac{Q_3 - Q_1}{2} = \frac{19 - 8,5}{2} \checkmark$
 $= 5,25 \checkmark$ (4)

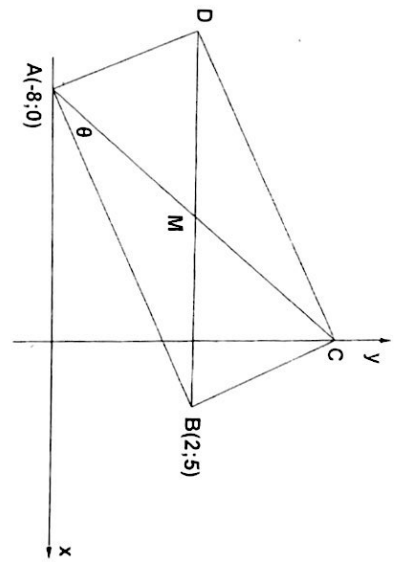
1.31 $\alpha = 30^\circ$ (1)
 1.32 25% van $\sqrt{2} = 3 \text{ minute}$ (2)
 1.33 25% ✓ (1)

[16]

92 ✓

uitbreiding
 of totaal ✓
 $\div 92 \checkmark$
 antw ✓
 interval ✓
 interval ✓

2.11 $M_{AB} = \frac{5-0}{2+8} = \frac{1}{2} \checkmark$ (2)
 2.12 $y = -2x + c$
 $(2,5) \rightarrow 5 = -2(2) + c \checkmark$
 $9 = c$
 $y = -2x + 9 \checkmark$ (3)



2.13 $(-4, 4\frac{1}{2})$ (2)
 2.14 $y = \frac{1}{2}x + c$
 $(4, 4\frac{1}{2}) \rightarrow 4\frac{1}{2} = \frac{1}{2}(-4) + c \checkmark$

2.15 $(8, 18)$ (3)
 $BD = A C \text{ (hoeklynge geelyk)} \checkmark$
 $AC = \sqrt{(-8-0)^2 + (0-\frac{1}{2})^2} \checkmark$
 $BD = \sqrt{145} \checkmark$
 $-12,04 \checkmark$ (3)

2.16 $\sin \theta = \frac{215}{1145} \checkmark$ (3)
 $\theta = 21,80^\circ \checkmark$
 $M_{PA} = \frac{2-5}{1+1} = 1 \checkmark$
 $M_{QR} = \frac{1+1}{1-1} \checkmark$ (2)

2.18 $y = 2 \checkmark$ (3)
 $y = 4 \checkmark$
 $y = 2 = 2 \checkmark$
 $y = 4 \checkmark$

subst antw ✓
 gradient ✓
 subst ✓

vylyn ✓
 $x \checkmark$
 $y \checkmark$
 gradient ✓
 subst ✓
 vylyn ✓

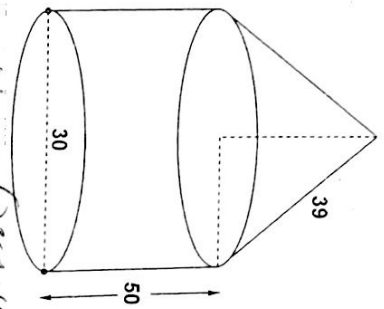
$x \checkmark$
 $y \checkmark$
 hoeklynge
 subst ✓
 antw ✓

$\sin \theta \checkmark$
 $\theta \checkmark$

$M_{PA} \checkmark$
 $M_{QR} \checkmark$
 $y \checkmark$

7.

$$\pi r(h+r) - \pi r^2$$



$$\begin{aligned} 7.1. \quad BO &= \pi r h \quad \checkmark \\ &= \pi (15) (39) \quad \checkmark \\ &= 585 \pi = 1837,83 \text{ cm}^2 \quad \checkmark \end{aligned}$$

$$7.2. \quad H^2 = (39)^2 + (15)^2 \quad \checkmark$$

$$H = 36 \quad \checkmark$$

$$\begin{aligned} V &= \frac{1}{3} \pi r^2 H + \pi r^2 h \\ &= \frac{1}{3} \pi (15)^2 (36) + \pi (15)^2 (50) \end{aligned}$$

$$\begin{aligned} &= 13950 \pi \\ &= 43825,22 \text{ cm}^3 \quad \checkmark \end{aligned}$$

15)

$$7.3. \quad V_{\text{Kärl}} = 2700 \pi \quad (8482,30)$$

$$\begin{aligned} V_{\text{Kärl}} &= \frac{1}{2} \left(\frac{4}{3} \pi r^3 \right) \quad \checkmark \\ &= \frac{1}{2} \left(\frac{4}{3} \pi (15)^3 \right) \quad \checkmark \end{aligned}$$

$$\begin{aligned} &= 2250 \pi \quad (7068,58) \\ 2250 \pi &< 2700 \pi \quad \checkmark \end{aligned}$$

∴ mindre material $\checkmark$

(4)

[12]

Formule $\checkmark$

subst $\checkmark$

antw $\checkmark$

8th $\checkmark$

Subst i
rege formula

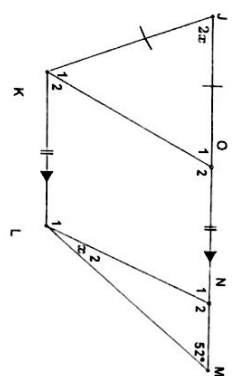
antw $\checkmark$

formula $\checkmark$

subst $\checkmark$

antw.

geometrisk
vinet brukning $\checkmark$



8.11. Parallelogram (for trekant $g \parallel a$) (2)

8.12. $\angle N_1 = \alpha + 52^\circ$ (butha Δ) $\checkmark$

$\angle O_1 = 90 - \alpha$ (sam v. Δ , gyltbrunje Δ) $\checkmark$

$\alpha + 52^\circ = 90 - \alpha$ (0012enkonst. $OK \parallel NL$) $\checkmark$

$$2\alpha = 38^\circ$$

$$\alpha = 19^\circ \quad \checkmark$$

(4)

Parallelogram

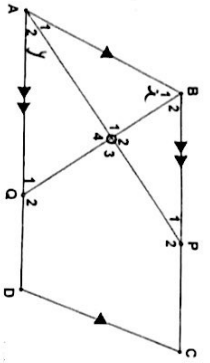
$\angle N_1 + \text{rele}$ $\checkmark$

$\angle O_1 + \text{rele}$ $\checkmark$

ke gylt + dreie $\checkmark$

$$\alpha = 19^\circ \quad \checkmark$$

82

821 In $\triangle BAO$ en $\triangle DAO$ is(1) AO gemeen(2) $\angle A_1 = \angle A_2$ (gegeven)(3) $\angle B_1 = \angle B_2$ (gegeven)
 $\therefore \triangle BAO \cong \triangle DAO$ (uit $\angle$ en $\angle$)

 $\therefore \angle O_1 = \angle O_4 = 90^\circ$ (uit kongruensie)
 $AO \perp BD$

(4)

 $\therefore \angle BAO + \angle DAO = 180^\circ$ (ko-kone $\angle$ BC)
 $x + y = 90^\circ$ $\angle O_1 = 90^\circ$ (som $\nabla \Delta$) $AO \perp BD$

(4)

 $\triangle AO$ gemeen
 $\angle A_1 = \angle A_2$
 $\angle B_1 = \angle B_2$ (gegeven)
 $\therefore \triangle BAO \cong \triangle DAO$ (uit $\angle$ en $\angle$)

 $\angle O_1 = \angle O_4 = 90^\circ$ (uit kongruensie)
 $AO \perp BD$ $\angle BAO + \angle DAO = 180^\circ$
 $x + y = 90^\circ$
 $\angle O_1 = 90^\circ$ (som $\nabla \Delta$)

(4)

822 In $\triangle BOP$ en $\triangle AOP$ is(1) $\angle O_2 = \angle O_4$ (gegeven)(2) $BO = PO$ (uit 821)(3) $\angle B_2 = \angle A_2$ (gegeven)
 $\therefore \triangle BOP \cong \triangle AOP$ (uit $\angle$ en $\angle$)

 $AO = OP$ en $BO = PO$
 $AO \perp BO$
 $\triangle BOP$ is uit (hoeklyn $\perp$ bis)

 $\angle O_1 = \angle O_4 = 90^\circ$
823 $AB = 2\sqrt{10}$ (gegeven)
 $CD = 2\sqrt{10}$ (gegeven)

(2)

 $AB \parallel CD$
 $\angle O_1 = \angle O_2$ $BO = PO$ (uit 821) $\angle B_2 = \angle A_2$ (gegeven)
 $\therefore \triangle BOP \cong \triangle AOP$ (uit $\angle$ en $\angle$)

 $AO = OP$ en $BO = PO$
 $AO \perp BO$
 $\triangle BOP$ is uit (hoeklyn $\perp$ bis)

 $\angle O_1 = \angle O_4 = 90^\circ$
 $AB \parallel CD$
 $AB = 2\sqrt{10}$ (gegeven)

(2)

 $AB \parallel CD$