

# KLASKAMER 10

## GRAAD 11 WISKUNDE: EPISODE 13

### KWADRATIESE VERGELYKINGS 1

#### VRAAG 1:

Los op vir  $x$  in elkeen van die volgende:

- 1.1  $x(12x - 5) = 2$  (3)  
1.2  $bx^2 + b^2x = 2x + 2b; b \neq 0$  (4)  
1.3  $x(x - 2) = p(p - 2)$  (4)  
1.4  $mpx^2 - (m^2 - p^2)x = mp; m, p \neq 0$  (4)

**BLIKslim**

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TOTAAL: 15 PUNTE

# GRAAD 11 WISKUNDE: EPISODE 13 (MEMORANDUM)

## KWADRATIESE VERGELYKINGS 1

### VRAAG 1

1.1	$x(12x - 5) = 2$ $\therefore 12x^2 - 5x - 2 = 0 \checkmark$ $\therefore (3x - 2)(4x + 1) = 0 \checkmark$ $\therefore x = \frac{2}{3} \text{ of } x = -\frac{1}{4} \checkmark$	1.2	$bx^2 + b^2x = 2x + 2b$ $\therefore bx^2 + b^2x - 2x - 2b = 0 \checkmark$ $\therefore bx(x + b) - 2(x + b) = 0 \checkmark$ $\therefore (x + b)(bx - 2) = 0 \checkmark$ $\therefore x = -b \text{ of } x = \frac{2}{b} \checkmark$
1.3	$x(x - 2) = p(p - 2)$ $\therefore x^2 - 2x = p^2 - 2p \checkmark$ $\therefore x^2 - p^2 - 2x + 2p = 0 \checkmark$ $\therefore (x - p)(x + p) - 2(x - p) = 0$ $\therefore (x - p)(x + p - 2) = 0 \checkmark$ $\therefore x = p \text{ of } x = 2 - p \checkmark$	1.4	$mpx^2 - (m^2 - p^2)x = mp$ $\therefore mpx^2 - m^2x + p^2x - mp = 0 \checkmark$ $\therefore mx(px - m) + p(px - m) = 0 \checkmark$ $\therefore (px - m)(mx + p) = 0 \checkmark$ $\therefore px - m = 0 \text{ of } mx + p = 0$ $\therefore x = \frac{m}{p} \text{ of } x = -\frac{p}{m} \checkmark$

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