

# National 5 Practice Paper A

## Answers

### Paper 1

1.  $1\frac{13}{20}$

2.  $(x + 5)(x - 3)$

3.  $y = 10x + 5$

4.  $y = (x + 4)^2 - 23$ , T.P.(-4, -23)

5.  $R = \sqrt[3]{\frac{P+5}{b}}$

6a.  $\begin{pmatrix} -10 \\ 4 \end{pmatrix}$                       b.  $\sqrt{116}$

7.  $b = 3$

8.  $(3, -1)$

9.  $b^2 - 4ac = -19 < 0$  Therefore there are no real roots

10.  $y + 3 = 3(x - 5)$

11a.  $(2, -9)$                       b.  $C(0, -5)$                       c.  $B(5, 0)$

12. Proof

13a.  $\frac{6-2x}{x(x+2)}$                       b.  $8\sqrt{2}$

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### Paper 2

1. 581 000

2a.  $\bar{x} = 60$ ,  $s = 11.03$  (2dp)

2b. On average the marks of both groups are the same.

However, the marks from Group A are much more consistent.

3.  $2x^3 + 11x^2 + 11x - 4$

4. 8.5 km

5. 3329 centimetres

6a.  $63\,000\text{ cm}^3$

b. 8.4 cm (using the answer to part a)

7.  $237.76\text{ cm}^2$

8a.  $2a^{\frac{3}{2}} + a^3$

b.  $x = 1.1$  or  $-2.1$

9a.  $x = 128.66^\circ$ ,  $308.66^\circ$

b. proof

10a. proof

b. length = 35 cm, breadth = 15 cm