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.
$$\binom{-10}{4}$$

b.
$$2\sqrt{29}$$

7.
$$b = 3$$

8.
$$(3,-1)$$

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

10.
$$y = 3x - 18$$

11a.
$$(2, -9)$$

b.
$$C(0, -5)$$

c.
$$B(5,0)$$

12.
$$P(rectangle) = P(square)$$

$$2l + 2(x+3) = 4(2x+2)$$

$$l+x+3=2(2x+2)$$

$$l = 4x + 4 - x - 3$$

$$l = 3x + 1$$
 as required

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

b.
$$8\sqrt{2}$$

National 5 Practice Paper A

Answers

Paper 2

- 1. 581 000
- 2a. $\bar{x} = 60$, s = 11.03 (2dp)
- 2b. On average the marks of both groups are the same since 60 = 60However, the marks from Group A are much more consistent since 11.03 < 29.8.
- 3. $2x^3 + 11x^2 + 11x 4$
- 4. 8.5 km
- 5. 466.73 centimetres
- 6a. 63 000 cm³

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

- 7. 237.76 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 using $\tan x = \frac{\sin x}{\cos x}$
- 10a. Area = length × breadth = $(30+x)(10+x) = 300+30x+10x+x^2 = x^2+40x+300$.
- 10b. length = 35 cm, breadth = 15 cm