National 5 Practice Paper G

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Answers

Paper 1

1. $\frac{4}{11}$

2. $2(m + 3)(m - 3)$

3. $f(-3) = -4$

4. $x = \frac{-7}{5}$

5. $4\sqrt{7}$

6. $(x + 5)^2 - 8$

7. a) $24x + 6y = 60$ (b) $20x + 10y = 40$ (c) 25 points

8. $LEPR = 138°$

9. $4g - 3h = 44$

10. $\frac{2}{3}\underline{a} + \frac{1}{2}\underline{b}$

11. Proof

12. b

13. $\frac{5p}{4}$

14. Proof

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Paper 2

1. 3.24×10^{15}

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

3. 2.61 m

4. $r = \sqrt{\frac{p-q}{2}}$

5. $x = 1.3$ or -2.8

6. a) Median = 58.5 IQR = 22
   b) Performance has improved as the median has increased, $67 > 58.5$
   Performance is more consistant since the IQR has fallen, $14 < 22$

7. $h = 47.7$km

8. $A = 7755\text{cm}^2$, so the claim is **NOT** justified as $7755 < 8040$

9. $|2\underline{u} - \underline{v}| = 7$

10. Since $110^2 \neq 90^2 + 60^2$, the triangle is **NOT** right angled.

11. 36.4cm^3

12. a) $a = -5$ $b = 1$ (b) $P(0\ ,\ 26)$ $Q(10\ ,\ 26)$

13. a) $P(90°\ ,\ 1)$ (b) $Q \rightarrow 48.6°$ $R \rightarrow 131.4°$

14. 12 seconds