

National 5 Practice Paper G

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. $\angle EPR = 138^\circ$

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 consistent since the IQR has fallen, $14 < 22$
7. $h = 47.7\text{km}$
8. $A = 7755\text{cm}^2$, so the claim is **NOT** justified as $7755 < 8040$
9. $|2\underline{u} - \underline{v}| = \sqrt{17}$
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) $P(90^\circ, 1)$ (b) $Q \rightarrow 48.6^\circ$ $R \rightarrow 131.4^\circ$
14. 12 seconds