

# National 5 Practice Paper F

## Answers

### Paper 1

Q1.  $4\frac{6}{35}$

Q2. (a)  $(2x + y)(2x - y)$  (b)  $\frac{2x-y}{3}$

Q3. On average the number of cigarettes smoked went down after the course. However, there was more variability in the number of cigarettes smoked after the course.

Q4. (a)  $y - 21 = 2(x - 9)$  or equivalent (b) 43

Q5.  $3\sqrt{2}$

Q6.  $x > 3$

Q7.  $y = (x - 1)^2 - 4$

Q8. (a)  $m = -\frac{1}{2}$  (b)  $c = 3$

Q9.  $121^\circ$

Q10.  $a = 30$

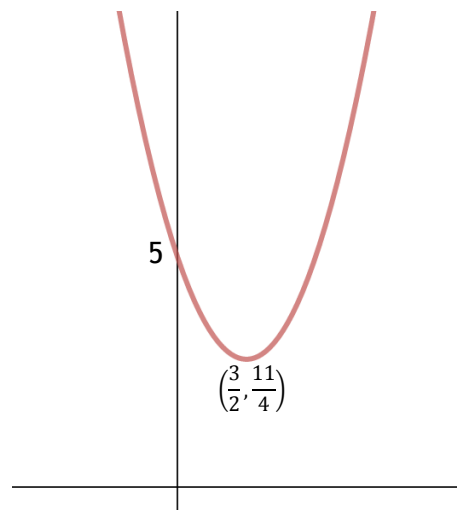
Q11. 750 grams

Q12. (a)  $b^2 - 4ac < 0$  therefore no real roots

(b)  $y = \left(x - \frac{3}{2}\right)^2 + \frac{11}{4}$  (c)

Q13. (a)  $150 \text{ m}^2$  ( $\sin 90^\circ = 1$ )

(b) 12 metres



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#### Paper 2

Q1.  $3.12 \times 10^8$  kilometres

Q2. £25 073.75

Q3.  $x = c(b - a)$  (or equivalent)

Q4.  $x = \frac{5}{2}, y = \frac{3}{2}$  (or  $x = 2.5, y = 1.5$ )

Q5. 550 cubic centimetres (to 2 SF)

Q6. 27 centimetres

Q7. (a)  $124^\circ$  (b) 305 metres (to 3 SF)

Q8.  $\frac{2x-7}{(x+1)(x-2)}$

Q9. 2230.5 grams (to 1 decimal place)

Q10. (a) 14 diagonals (b) proof (c) 13 sides

Q11. (a) 3.87 metres (1 decimal place)

(b) 150.6 seconds (c) 209.4 seconds