

National 5 Practice Paper D

Answers

Paper 1

Q1. $m_{AB} = -\frac{5}{4}$

Q2. $\frac{11}{5}$ or $2\frac{1}{5}$

Q3. $y = 2x + 1$

Q4. a(i) Median = 58.5 (ii) SIQR = 11

b On average, after the extra revision classes, there was an improvement in the students' marks since $67 > 58.5$.

After the extra classes the marks were more consistent since $7 < 11$.

Q5. 400 grams

Q6. $h - f - g$ or equivalent

Q7. a P(-2, -16) b Q(6, -16) c $y = (x - 14)^2 - 16$

Q8. $\frac{7m+3}{m(m+1)}$

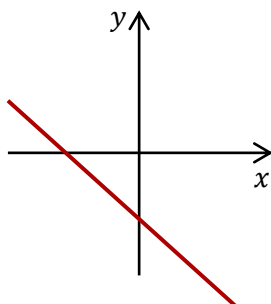
Q9. a = 4, b = 3

Q10. $\frac{4}{3}$

Q11. $4\sqrt{3}$

Q12. Circumference = $2\pi r = 10$, $r = \frac{10}{2\pi} = \frac{5}{\pi}$. Area = $\pi r^2 = \pi \left(\frac{5}{\pi}\right)^2 = \pi \left(\frac{25}{\pi^2}\right) = \frac{25}{\pi}$

Q13.



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Paper 2

Q1. £165 000

Q2. a (i) 16.5 mm (ii) 1.87 mm (2dp)

Q2. b (i) 20.5 mm (ii) 1.87 mm (2dp)

Q3. $x = 228.6^\circ, 311.4^\circ$

Q4. a $14x + 4y = 55$ b $13x + 6y = 54.5$

c Adult entrance fee £3.50. Child entrance fee £1.50.

Q5. a $x = -3$ b $y = (x + 3)^2 - 4$ c C(0,5)

Q6. a 15.597... m b 111.6 m^2 (1dp)

Q7. 800 mm

Q8. $k = \pm 4$

Q9. 1902.1 cm^3 (1dp)

Q10. $\frac{7x+9}{x(x+3)}$

Q11. a Area lawn = Area path

Area of lawn = Total area of garden – Area of path

$$3x \times x = (x+1)(3x+2) - 3x \times x$$

$$3x^2 = 3x^2 + 5x + 2 - 3x^2$$

$$3x^2 - 5x - 2 = 0$$

b The lawn is 6 metres in length.