

Practice Paper 1 – Non Calculator

1. Multiply the brackets and simplify

$$(3x - 1)(x^2 - 2x + 3) \quad 3$$

2. Evaluate  $17\frac{2}{3} - 8\frac{3}{5}$  Leave your answer as a mixed number. 3

3. Decrease 840 by 13% 3

5. (a) Factorise  $12x - 18$  1

- (b) Factorise  $x^2 - 25$  2

6. Express  $x^2 - 6x + 11$  in the form  $(x - a)^2 + b$  by completing the square. 2

7. Change the subject of the formula to  $k$

$$\sqrt{\frac{k+7}{9}} = y \quad 3$$

8. Fish food is on special offer.

Each jar on offer contains 30% more than the standard jar.

A jar on offer contains 390 grams of fish food.



How much does the standard jar contain?

3

9. Simplify  $(2x^5)^3$  2
11. Point A(-3,7) and point B(1,-3) are joined by a straight line
- (a) Determine the gradient of this line. 2
- (b) Determine the equation of the line. 2
12. (a) Fully simplify  $\sqrt{27} - \sqrt{12}$ . 3
- (b) Write  $\frac{15}{\sqrt{3}}$  with a rational denominator in its simplest form. 2

13. At a florist shop, Steve buys 3 roses and 2 tulips for £9.40
- (a) Write an equation to represent this information. 1

At the same florist shop, Natalie buys 2 roses and 4 tulips for £8.40

- (b) Write an equation to represent this information. 1

- (c) Find, algebraically, the cost of 1 rose and the cost of 1 tulip. 3