

National 5 Homework

Mixed Homework

Exercise 10

All the questions in this exercise are exam **gift questions**. There is even a clue on how to take the gift.

1. Simplify $x^{3/4}(2x^{5/4} - 3x^{-3/4})$. **Remember you are ADDING the indices and adding simple fractions.**

2. Evaluate $1\frac{4}{5} - \frac{2}{3} \div \frac{5}{6}$ **This is about BODMAS as well as fractions.**

3. Two cappuccinos and three lattes cost £12.80

a) Write down an equation to represent this information.

Three cappuccinos and four lattes cost £17.85

b) Write down a second equation to represent this information.

c) Solve these equations to find the cost of one cappuccino and the cost of one latte.

It should be clear this is a simultaneous equations question.

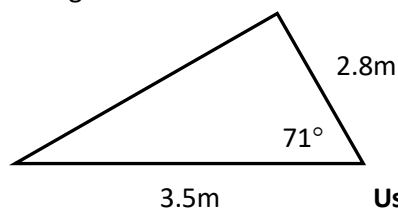
4. Fully factorise $5t^2 - 20$. **FULLY means 2 step factorising.**

5. Find the equation of the straight line joining the points (3,2) and (-3,6). **Gradient then use the equation $y - b = m(x - a)$.**

6. Solve $3x^2 + 2x - 8 = 0$. **Factorise first, making sure the signs are correct.**

7. Write $x^2 + 10x - 4$ in the form $(x - a)^2 + b$, and state the equation of the axis of symmetry, the turning point and the point where it crosses the y-axis. **Half, Square, Remove. Crosses y-axis when $x = 0$.**

8. Calculate the area of the triangle below



Use the correct given formula – Find it.

9. The shape below needs to have braiding placed all around it. What length of braiding is required to surround the shape?

