

**FOUNDATION TIER
MINI PRACTICE EXAM 4**

**CALCULATOR ALLOWED
20 MINUTES ALLOWED**

1.

(a) Work out $\sqrt{\frac{42 \times 2.5}{1.35}}$ to 2 significant figures

8.8

(1)

(b) Work out $\left(\frac{14.6}{2.36}\right)^3$ to 2 decimal places

236.77

(1)

2.

Lewis is planning on cooking a chicken from frozen.
He reads the instructions.

<p style="text-align: center;">To cook:</p> <p style="text-align: center;">1. Defrost for an hour for each 400g 2. Cook for 100 minutes</p>
--

The chicken weighs 3.6 kilograms.
Lewis is going to start defrosting the chicken at 7am.
Will the chicken be ready to eat by 5:30pm?

$$3600 \div 400 = 9 \text{ hours}$$

$$7 \text{ am} + 9 \text{ hours} = 4 \text{ pm}$$

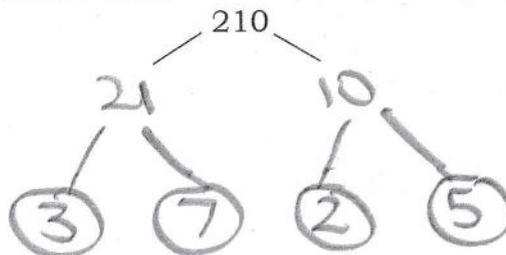
$$4 \text{ pm} + 100 \text{ minutes} = 5:40 \text{ pm}$$

No

(3)

3.

(a) Complete the prime factor tree.



(3)

(b) Using your prime factor tree, express 210 as a product of its prime factors.

$$210 = 3 \times 7 \times 2 \times 5$$

(1)

4.

(a) Solve $8x - 17 = 35$

$$\begin{array}{r} +17 \qquad +17 \\ 8x = 52 \\ \div 8 \qquad \div 8 \\ \hline x = 6.5 \end{array}$$

(2)

(b) Expand and simplify $(x + 4)(x - 5)$

$$x^2 + 4x - 5x - 20 = \underline{x^2 - x - 20}$$

(2)

5.

Kate runs a catering company.

She needs to make 150 cups of coffee for a film crew.

Coffee is sold in 125g tins, which cost £2.25 each.

Each cup of coffee requires 5g of coffee.

How much will it cost Kate to buy the coffee she needs for the film crew?

$$150 \times 5 = 750 \text{ g required}$$

$$750 \div 125 = 6 \text{ tins required}$$

$$6 \times \text{£}2.25 = \underline{\text{£}13.50}$$

(3)

6.

Mary drove at 60 miles per hour for 40 minutes.

Nathan drove at 30 miles per hour for an hour and a half.

How many more miles did Nathan drive than Mary?

$$40 \text{ minutes} = \frac{2}{3} \text{ hours}$$

$$\text{Mary: } 60 \times \frac{2}{3} = 40 \text{ miles}$$

$$\text{Nathan: } 30 \times 1.5 = 45 \text{ miles}$$

$$45 - 40 = \underline{5 \text{ miles}}$$

(4)