**Fundamentals to Practice Going into yr 11 (5)**

1. **Arithmetic**. Work out

$$3\frac{1}{2}÷2\frac{2}{3}$$

1. **Percentages**. A suitcase is sold for £65 after a 10% discount. What was the original price of the suitcase?
2. **Linear Algebra**. Solve simultaneously:

$$2x+3y=15$$

$$4x-y=16$$

1. **Quadratic Algebra.** Expand:

$$\left(2x+4\right)^{2}$$

1. **Volume and Area**. The volume of a cube is $125 cm^{3}$ . What’s its surface area?
2. **Pythagoras and Trig**. Work out the area of a equilateral triangle with sides measuring 14cm. Give your answer to 2 significant figures
3. **Statistics and Probability.** Data about the height of 30 tomato plants are summarised in the table below. Estimate the mean height. Give your answer to 1 decimal place..

|  |  |
| --- | --- |
| **Height,** $h $**(cm)** | **Frequency** |
| $$20\leq h<30$$ | 2 |
| $$30\leq h<40$$ | 8 |
| $$40\leq h<50$$ | 10 |
| $$60\leq h<70$$ | 7 |
| $$70\leq h<80$$ | 3 |