1   Calculate.

$$\frac{6.26 - 0.82}{1.55}$$

Give your answer correct to 2 decimal places.

_____ **[2]**

2 In 2014 the Winter Olympics were held in Russia.

(a) This two-way table shows the medals won by the top three countries.

Country	Gold	Silver	Bronze	Total
Russian Federation	13			33
Norway	11		10	26
Canada	10	10	5	25
Total	34	26		

Complete the table. **[3]**

(b) In the men's 50 km cross-country skiing race, the winner finished in 1 hour 46 minutes 55.2 seconds.

The last competitor to finish took 21 minutes 6.8 seconds longer.

What was the last competitor's time for the race?

.... hours .... minutes .... seconds **[2]**

3 Calculate.

(a) $\dfrac{3.36 + 139.2}{2.4 \times 1.25}$

(a) _____ **[1]**

(b) $\sqrt{6.2^3 - 7.288}$

(b) _____ **[1]**

4 **(a** The voltage in an electric circuit is calculated using this formula.

Voltage in volts = Current in amps × Resistance in ohms

Calculate the voltage when the resistance is 6.5 ohms and the current is 3.6 amps.
Give your answer correct to **two** significant figures.

(a) _____ volts **[4]**

(b) The resistance in an electric circuit is calculated using this formula.

$$\text{Resistance in ohms} = \frac{\text{Voltage in volts}}{\text{Current in amps}}$$

Calculate the resistance when the voltage is 10^{12} volts and the current is 10^3 amps.

(b) _____ ohms **[1]**

5   Marcus has the calculation $4.648 \div 0.28$ to do for his homework.

Fill in the boxes to complete his method.

The numbers in boxes A and B are identical.

$$4.648 \div 0.28 = \boxed{\text{A} \qquad\quad} \div 28$$

$$= \boxed{\text{B} \qquad\quad} \div \boxed{\text{C} \quad} \div 7$$

$$= \boxed{\text{D} \qquad\quad} \div 7$$

$$= \boxed{\text{E} \qquad\quad}$$

[4]

6 You are given that $411 \times 32 = 13\,152$.

Use this information to work out the answer to each of the following.

(a) 4110×320

(a) .... [1]

(b) 4.11×320

(b) .... [1]

(c) $13.152 \div 32$

(c) .... [2]

7 A school has a delivery of identical maths textbooks.
6 of these books, placed side by side, take up 15.9 cm of shelf length.

(a) What shelf length is taken up by 10 of these books, placed side by side?

(a) .... cm **[3]**

(b) Another shelf is 90 cm long.

How many of these books will fit, side by side, on this shelf?

(b) .... **[3]**

8 **(a** Express 90 as a product of its prime factors.

(a) _____ **[2]**

(b) A factory has a buzzer which sounds every 90 minutes.
It also has a bell which sounds every 150 minutes.
The buzzer and bell sound together at 9 am.

At what time do they next sound together?

(b) _____ **[3]**

9 (a Calculate.

(i) $\dfrac{151.2}{16.8 + 5.6}$

(a)(i) _____ **[1]**

(ii) $(2.6 + 5.9)^3$

(ii) _____ **[1]**

(b) Insert brackets to make this calculation correct.

$$2 \quad +$$

[1]

(c) Vita calculated that, on average, students in her class took 3.85 minutes to complete a puzzle.

Write this average time in seconds.

(c) _____ s **[2]**