MU123 quiz answers

*Discovering mathematics*

**Answer 1**

\[3^\circ - (-5^\circ) = 8^\circ C.\]

**Answer 2**

(c) 30 cm by 30 cm is probably the best choice, as this size would give the most flexibility as generally rooms are at least 2 m by 3 m.

Reasons for rejecting the others are:

(a) too small

(b) too large (may be larger than the room!)

(d) much too large, more like a very large field.

**Answer 3**

(a) \((-2) \times (-1.5) = 2 \times 1.5 = 3\)

(b) \(\frac{8}{20} + \frac{15}{20} = \frac{23}{20} = 1 \frac{3}{20}\)

(c) \(\frac{2}{3} \times \frac{9}{5} = \frac{18}{15} = \frac{6}{5} = 1 \frac{1}{5}\)

(d) \(2.13 + (-5.74) = 2.13 - 5.74 = -3.61\)

(e) \((-27) \div 3 = -9\)

(f) \(5^2 = 5 \times 5 = 25\)

**Answer 4**

15\% of 310 = \(\frac{15}{100} \times 310 = 0.15 \times 310 = 46.5\).

So you would pay £310 - £46.50 = £263.50.

**Answer 5**

\(22 \div 1.42 = 15.49295775\), so the cost is about £15.49.

**Answer 6**

Area of the garden is \(7 \times 5 = 35\) m\(^2\)

Area of the flower bed is \(\pi \times (1.5)^2 = 3.14159\ldots \times (1.5)^2 = 7.0685\ldots \approx 7.069\) m\(^2\)

Area of lawn is \(35 - 7.069 = 27.931\) m\(^2\)

Amount of seed required is \(400 \times \frac{27.931}{8} = 1396.5\ldots = 1400\) g (to the nearest 100 g).

**Answer 7**

Since it is a right-angled triangle, one angle is 90\(^\circ\). The angles of a triangle add to 180\(^\circ\) which gives \(180^\circ - (28^\circ + 90^\circ) = 62^\circ\) as the size of the third angle.

[END OF ANSWERS]