

## Unit 42: Everyday Mathematics

**1. M/J 12/P12/Q2**

The temperature in a freezer is  $-18^{\circ}\text{C}$ .

The outside temperature is  $24^{\circ}\text{C}$ .

(a) Find the difference between the outside temperature and the freezer temperature. [1]

(b) The temperature in a fridge is  $22^{\circ}\text{C}$  warmer than the freezer temperature.  
Find the temperature in the fridge. [1]

**2. M/J 12/P11/Q13**

Gill swims lengths of the swimming pool.

The pool is 25 m long and she swims a total of 1.6 km.

(a) How many lengths of the pool does she swim? [1]

(b) Gill swims for  $1\frac{1}{4}$  hours and ends her swim at 11 05.  
(i) At what time did she begin her swim? [1]  
(ii) What is her average speed, in kilometres per hour? [1]

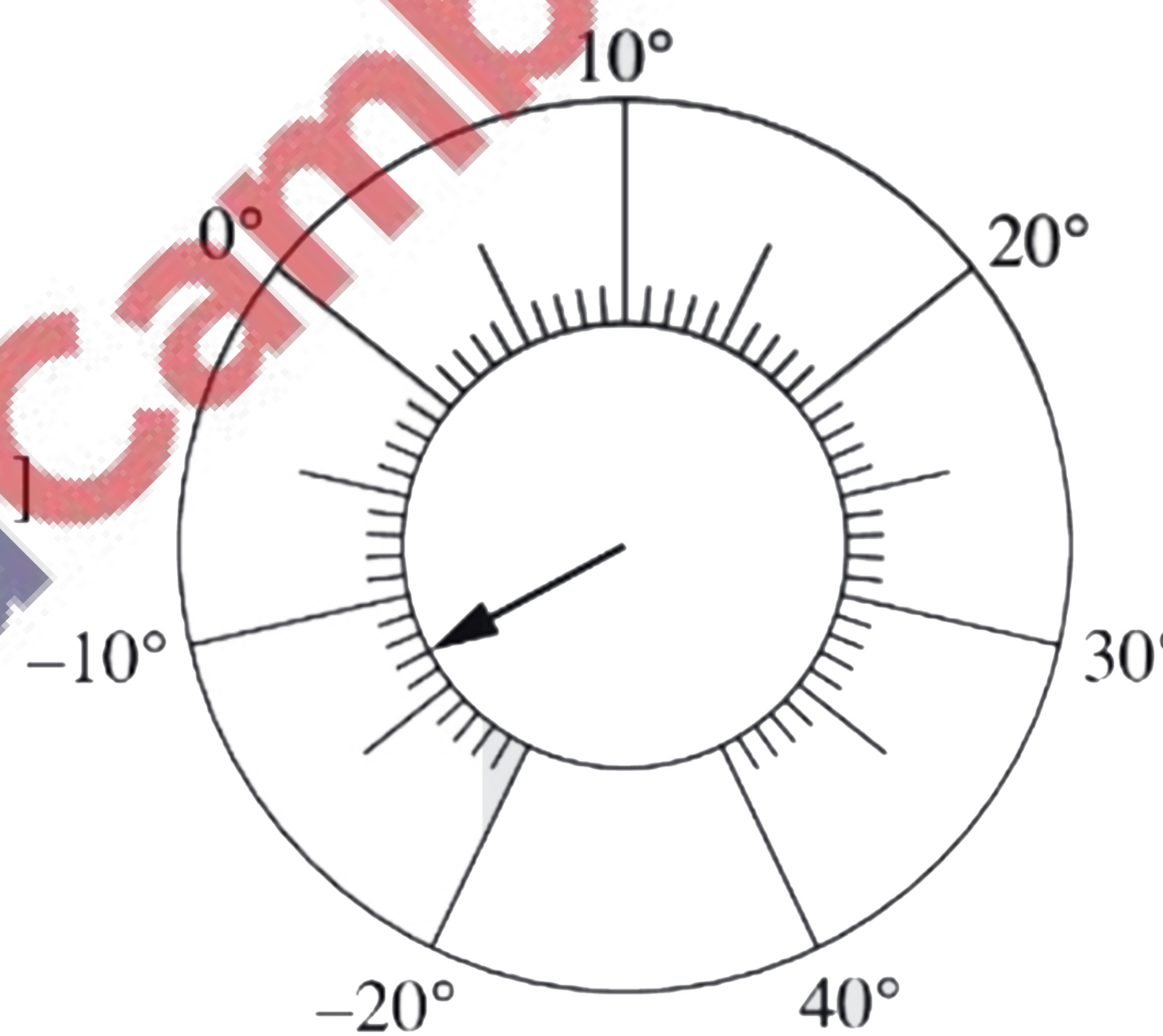
**3. O/N 11/P11/Q12/a,b**

The diagram shows a thermometer, with a circular dial, that records temperatures in  $^{\circ}\text{C}$ .

(a) Write down the temperature indicated by the pointer. [1]

(b) When the temperature increases from  $-20^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ , the pointer turns through an angle of  $300^{\circ}$ .

Calculate the angle through which the pointer turns when there is a  $7^{\circ}\text{C}$  rise in temperature. [1]



**4. M/J 11/P12/Q17**

The table shows the height, in metres, above sea level of the highest and lowest points in some continents.

A negative value indicates a point below sea level.

	Asia	Africa	Europe	South America
Highest point (m)	8850	5963	5633	6959
Lowest point (m)	-409	-156	-28	-40

(a) What is the height above sea level of the highest point in Africa?  
Give your answer in **kilometres**. [1]

(b) In South America, how much higher is the highest point than the lowest point?  
Give your answer in metres. [1]

(c) How much higher is the lowest point in Europe than the lowest point in Asia?  
Give your answer in metres. [1]

**5. M/J 11/P12/Q23/a(i), b****(a)** Imran is paid \$16 per hour.**(i)** One week he works 35 hours.

Calculate the amount he is paid for the week. [1]

**(b)** The exchange rate between pounds and dollars is £1 = \$1.80.

Anna converts \$270 into pounds.

Calculate the number of pounds Anna receives. [2]

**6. O/N 10/P12/Q5/a, O/N 10/P13/Q5/a****(a)** The mass of a container and its contents is 2.4 kg.

The mass of the contents is 750 g.

Calculate the mass, in kilograms, of the container. [1]

**7. O/N 10/P12/Q15, O/N 10/P13/Q15**

In a sale, a shopkeeper reduced the marked price of his goods by 20%.

**(a)** The marked price of a book was \$20.

Calculate its price in the sale. [1]

**(b)** The price of a camera in the sale was \$60.

Calculate its marked price. [2]

**8. O/N 10/P11/Q3/b****(a)** The mass of a jar and its contents is 1.6 kg.

The contents have a mass of 875 grams.

Calculate the mass, in grams, of the jar. [1]

**9. O/N 10/P11/Q10/a**

The temperatures, in °C, at midnight on 12 consecutive days were

-1, 0, -4, 1, 2, -2, -1, -3, 1, 2, 3, 2.

**(a)** Find the mode of these temperatures. [1]**10. M/J 10/P12/Q8, M/J 10/P13/Q8**

The table shows the record minimum monthly temperatures, in °C, in Vostok and London.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Vostok	-36	-47	-64	-70	-71	-71	-74	-75	-72	-61	-45	-35
London	-10	-9	-8	-2	-1	5	7	6	3	-4	-5	-7

Find

**(a)** the difference between the temperatures in Vostok and London in July, [1]**(b)** the difference between the temperatures in Vostok in February and June. [1]

## Answer Section

- 1. M/J 12/P12/Q2**  
 (a) 42 1  
 (b) 4 1
- 2. M/J 12/P11/Q13**  
 (a) 64 1  
 (b) (i) (0)9 50 1  
       (ii) 1.28 oe isw 1
- 3. O/N 11/P11/Q12/a,b**  
 (a) -13 1  
 (b) 35 1
- 4. M/J 11/P12/Q17**  
 (a) 5.963 1  
 (b) 6999 1  
 (c) 381 cao 1
- 5. M/J 11/P12/Q23/a(i), b**  
 (a) (i) 560 1  
 (b) 150 2
- 6. O/N 10/P12/Q5/a, O/N 10/P13/Q5/a**  
 (a) 1.65 1
- 7. O/N 10/P12/Q15, O/N 10/P13/Q15**  
 (a) 16 (.0)(0) 1  
 (b) 75 (.0)(0) www 2
- 8. O/N 10/P11/Q3/b**  
 (a) 725 1
- 9. O/N 10/P11/Q10/a**  
 (a) 2 1
- 10. M/J 10/P12/Q8, M/J 10/P13/Q8**  
 (a) 81 1  
 (b) 24 1