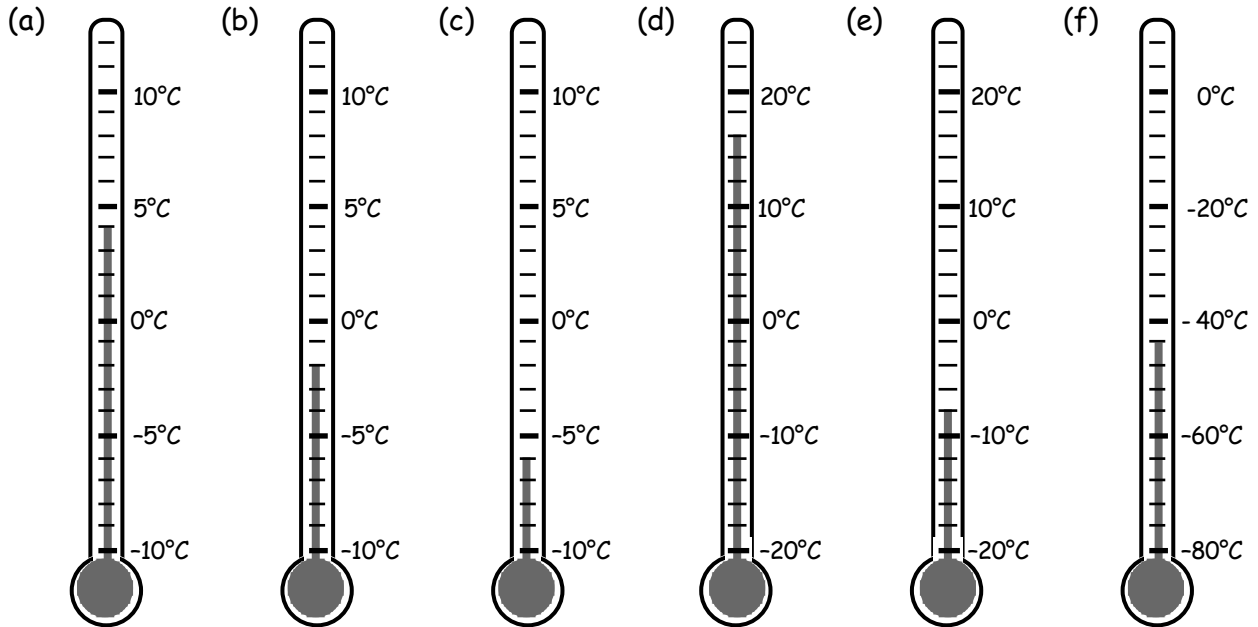


**Chapter 5**

**Negatives**

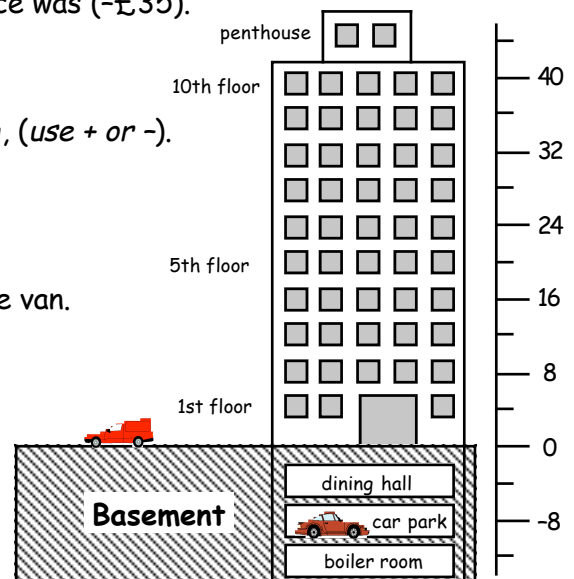
**Exercise 1**

1. Write the temperatures shown by each thermometer.



2. (a) I had £30 in my bank account. I withdrew £45. What was my new bank balance ?  
 (b) John had £35 in his account. He withdrew £60. What was his new bank balance ?  
 (c) Susie had £30 in her bank account. After withdrawing some money, her balance was then (-£40). How much money had she withdrawn ?  
 (d) Bob had £45 in his account. Yesterday he withdrew £30. Today he withdrew some money and his balance was (-£35). How much did he withdraw ?

3. (a) Write the heights (in metres) of the following, (use + or -).  
 (i) the 10th floor (ii) the 7th floor  
 (iii) the penthouse (iv) the car park  
 (v) the boiler room (vi) the wheel of the van.



**Exercise 2 DO NOT MARK THE THERMOMETER SCALE.**

Use the thermometer scale to help with these questions.

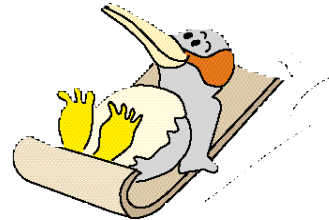
- What is the temperature that is :-
  - (a)  $7^{\circ}\text{C}$  up from  $2^{\circ}\text{C}$  ?      (b)  $5^{\circ}\text{C}$  up from  $5^{\circ}\text{C}$  ?      (c)  $10^{\circ}\text{C}$  up from  $0^{\circ}\text{C}$  ?
  - (d)  $5^{\circ}\text{C}$  down from  $7^{\circ}\text{C}$  ?      (e)  $12^{\circ}\text{C}$  down from  $15^{\circ}\text{C}$  ?      (f)  $7^{\circ}\text{C}$  down from  $0^{\circ}\text{C}$  ?
  - (g)  $3^{\circ}\text{C}$  up from  $-2^{\circ}\text{C}$  ?      (h)  $7^{\circ}\text{C}$  up from  $1^{\circ}\text{C}$  ?      (i)  $5^{\circ}\text{C}$  up from  $-7^{\circ}\text{C}$  ?
  - (j)  $9^{\circ}\text{C}$  down from  $4^{\circ}\text{C}$  ?      (k)  $3^{\circ}\text{C}$  down from  $-4^{\circ}\text{C}$  ?      (l)  $25^{\circ}\text{C}$  down from  $-25^{\circ}\text{C}$  ?

- Copy and complete using the words " $\dots^{\circ}\text{C}$  up" or " $\dots^{\circ}\text{C}$  down" :-

- (a)  $11^{\circ}\text{C}$  is  **$4^{\circ}\text{C}$  down** from  $15^{\circ}\text{C}$ .      (b)  $-13^{\circ}\text{C}$  is..... from  $5^{\circ}\text{C}$ .
- (c)  $9^{\circ}\text{C}$  is ..... from  $-3^{\circ}\text{C}$ .      (d)  $6^{\circ}\text{C}$  is..... from  $-1^{\circ}\text{C}$ .
- (e)  $3^{\circ}\text{C}$  is..... from  $-9^{\circ}\text{C}$ .      (f)  $-19^{\circ}\text{C}$  is..... from  $5^{\circ}\text{C}$ .

- The temperature in Glasgow on Christmas day was  $3^{\circ}\text{C}$ .  
On Boxing Day the temperature had dropped by  $5^{\circ}\text{C}$ .

What was the temperature on Boxing Day ?



- The temperature in Moscow yesterday changed as follows :-

<u>Noon</u>	<u>3 p.m.</u>	<u>6 p.m.</u>	<u>9 p.m.</u>	<u>Midnight</u>
$2^{\circ}\text{C}$	down by $5^{\circ}\text{C}$	up by $1^{\circ}\text{C}$	down by $8^{\circ}\text{C}$	down by $5^{\circ}\text{C}$

What was the temperature at (a) 3 p.m.      (b) 6 p.m.      (c) Midnight ?

**Exercise 3**

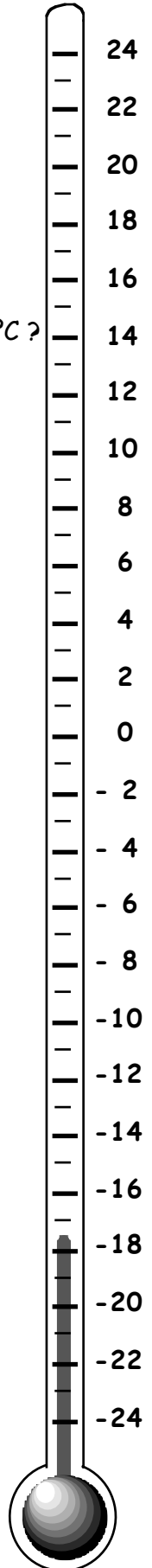
- Copy and find :-

- (a)  $5 + 4$       (b)  $5 + (-2)$       (c)  $4 + (-1)$       (d)  $6 + (-6)$
- (e)  $(-2) + 4$       (f)  $(-4) + 1$       (g)  $(-2) + 2$       (h)  $(-9) + 6$
- (i)  $8 + (-10)$       (j)  $(-12) + 15$       (k)  $13 + (-18)$       (l)  $(-9) + 13$
- (m)  $(-2) + (-2)$       (n)  $(-5) + (-1)$       (o)  $(-9) + (-3)$       (p)  $(-6) + (-6)$

- Find :-

- (a)  $3 - 2$       (b)  $5 - 8$       (c)  $2 - 8$       (d)  $5 - 11$
- (e)  $(-2) - 5$       (f)  $(-4) - 2$       (g)  $(-5) - 5$       (h)  $(-9) - 3$
- (i)  $(-1) - 1$       (j)  $(-3) - 1$       (k)  $(-12) - 5$       (l)  $(-8) - 8$

cont'd .....



3. Copy and find :-

- |                   |                |                |                  |
|-------------------|----------------|----------------|------------------|
| (a) $6 + 7$       | (b) $8 - 13$   | (c) $1 + (-5)$ | (d) $(-1) + 11$  |
| (e) $(-3) - 4$    | (f) $(-6) + 1$ | (g) $(-4) + 4$ | (h) $(-20) - 20$ |
| (i) $(-9) + (-9)$ | (j) $(-5) - 7$ | (k) $(-5) + 4$ | (l) $(-81) + 81$ |

**Exercise 4**

1. The coordinates of A are (-3,4).  
Write the coordinates of the other points.

2. (a) Copy the set of axes from question 1.

(b) Plot the following five points :-

J(2, 3), K(-1, 5), L(-4, 3),  
M(-4, -1) and N(2, -1).

(c) Name the shape formed when the five points are joined up in order.

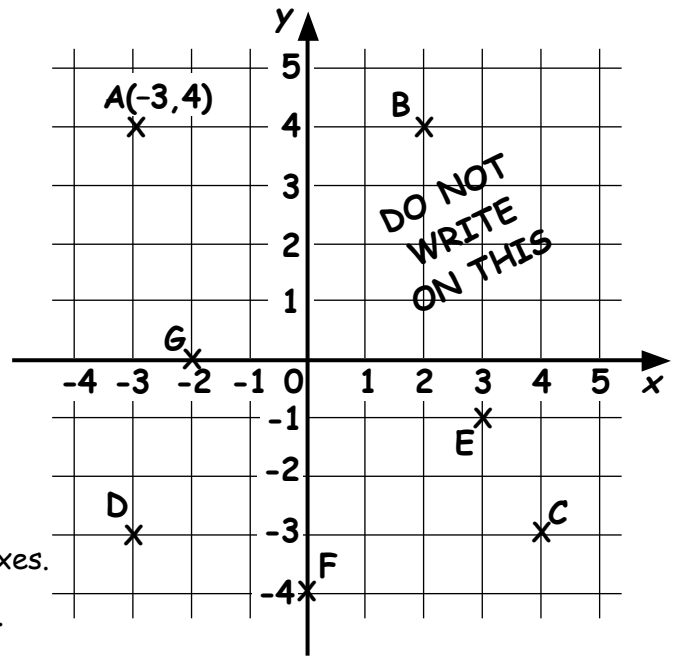
3. (a) Draw a set of axes from -5 to 5 on both axes.

(b) Plot the points S(3, 2), T(5, 2) and U(6, 5).

(c) Join the three points and write the name of the shape formed.

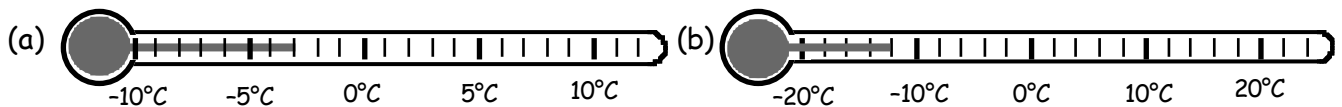
(d) Reflect this shape over the x-axis.

(e) Write the coordinates of the vertices of the new shape found.



**Revision Exercise**

1. Write the temperature shown by each thermometer.



2. Yesterday the temperature was 5°C. Last night the temperature dropped by 12°C.  
What was the new temperature ?

3. Find (a)  $7 + (-3)$  (b)  $(-5) + 9$  (c)  $(-3) + (-5)$  (d)  $(-7) - 2$  (e)  $(-15) - 5$ .

4. (a) Draw a set of axes from -5 to 5 on both axes.

(b) Plot the points A(3, 1), B(-2, 1) and C(-2,-3).

(c) Plot and write the coordinate of a 4th point (call it D), such that ABCD is a rectangle.

(d) Reflect the rectangle over the y axis and write down the coordinates of its vertices.