



# NEGATIVE NUMBERS

## Task 1

- 1) The temperature in Moscow is  $-12^{\circ}\text{C}$ . In Madrid, it's  $8^{\circ}\text{C}$ . What is the difference in temperature?  **$20^{\circ}\text{C}$**
- 2) A submarine is 200 m below sea level. Write this as a negative number. **-200**
- 3) Your bank balance is  $-\text{£}25$ . You earn  $\text{£}40$ . What is your new balance?  **$\text{£}15$**
- 4) A lift goes from the 3rd floor to the basement level -2. How many floors did it descend? **5 floors**
- 5) If it's  $4^{\circ}\text{C}$  now and the forecast says it will drop by  $9^{\circ}\text{C}$  overnight, what will the temperature be?  **$-5^{\circ}\text{C}$**
- 6) You owe your friend  $\text{£}10$ , and you borrow  $\text{£}15$  more. What is your total debt?  **$\text{£}25$**
- 7) A mountaineer descends from 200 m above sea level to 50 m below sea level. What is the total change in height? **250 m**
- 8) The stock market drops 7 points in one hour and 5 more the next hour. Express this change as a negative number. **-12**
- 9) If a city's temperature is  $-3^{\circ}\text{C}$  at 6 am and  $-8^{\circ}\text{C}$  at 8 am, how much did the temperature drop?  **$5^{\circ}\text{C}$**
- 10) You have  $\text{£}5$  in your account, but your card is declined after a transaction because your bank will not allow a balance of  $-\text{£}8$ . How much was the transaction?  **$\text{£}13$**

## Task 2 – Work out the following calculations.

- 11)  $-3 + 5 = \textcolor{red}{2}$
- 12)  $6 - 9 = \textcolor{red}{-3}$
- 13)  $-7 + (-2) = \textcolor{red}{-9}$
- 14)  $10 - -4 = \textcolor{red}{14}$
- 15)  $3 - -6 = \textcolor{red}{9}$
- 16)  $-4 + 9 = \textcolor{red}{5}$
- 17)  $-8 - 5 = \textcolor{red}{-13}$
- 18)  $7 + (-10) = \textcolor{red}{-3}$
- 19)  $-12 + 12 = \textcolor{red}{0}$
- 20)  $-6 - -3 = \textcolor{red}{-3}$
- 21)  $-11 + (-9) = \textcolor{red}{-20}$
- 22)  $0 - -7 = \textcolor{red}{7}$
- 23)  $10 - 13 = \textcolor{red}{-3}$
- 24)  $-5 + (-4) = \textcolor{red}{-9}$
- 25)  $-2 - 8 = \textcolor{red}{-10}$

## Task 3 – Work out the following calculations.

- 26)  $-3 \times 4 = \textcolor{red}{-12}$
- 27)  $-6 \div 2 = \textcolor{red}{-3}$
- 28)  $5 \times (-2) = \textcolor{red}{-10}$
- 29)  $-8 \times (-5) = \textcolor{red}{40}$
- 30)  $9 \div (-3) = \textcolor{red}{-3}$
- 31)  $-7 \times 6 = \textcolor{red}{-42}$

$$32) -12 \div (-4) = 3$$

$$33) 0 \times (-15) = 0$$

$$34) (-3) \times (-3) = 9$$

$$35) -20 \div 5 = -4$$

$$36) (-6) \times 2 = -12$$

$$37) 18 \div (-6) = -3$$

$$38) -10 \times (-10) = 100$$

$$39) (-9) \div 3 = -3$$

$$40) 4 \times (-7) = -28$$

### Challenge

41) A football team loses 3 matches in a row (each loss is worth -2 points), then wins 2 matches (each win is worth +3 points). Calculate their total points.

$$3 \times (-2) = -6$$

$$2 \times 3 = 6$$

$$-6 + 6 = 0 \text{ points}$$

42) The temperature was at  $x$   $^{\circ}\text{C}$ . It dropped by  $4^{\circ}\text{C}$ , then rose by  $9^{\circ}\text{C}$ , to a final temperature of  $2^{\circ}\text{C}$ . What was the starting temperature?

Use inverse operations:

$$2 - 9 = -7$$

$$-7 + 4 = -3$$

$$-3^{\circ}\text{C}$$

43) A bank balance is  $\text{£}x$ . You receive a payment of  $\text{£}35$ , then spend  $\text{£}62$ . Your account becomes overdrawn with a final balance of  $-\text{£}10$ . Work out the value of  $x$ .

Use inverse operations:

$$-10 + 62 = 52$$

$$52 - 35 = 17$$

$$x = \text{£}17$$

44) Calculate:

$$(-4)^3 + 18 - 2 - -3$$

$$= -64 + 18 - 2 + 3$$

$$= -46 - 2 + 3$$

$$= -45$$