

NEGATIVE NUMBERS

Task 1

- 1) The temperature in Moscow is -12°C . In Madrid, it's 8°C . What is the difference in temperature? **20°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°C now and the forecast says it will drop by 9°C overnight, what will the temperature be? **-5°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°C at 6 am and -8°C at 8 am, how much did the temperature drop? **5°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) $-3 + 5 = 2$
- 12) $6 - 9 = -3$
- 13) $-7 + (-2) = -9$
- 14) $10 - -4 = 14$
- 15) $3 - -6 = 9$
- 16) $-4 + 9 = 5$
- 17) $-8 - 5 = -13$
- 18) $7 + (-10) = -3$
- 19) $-12 + 12 = 0$
- 20) $-6 - -3 = -3$
- 21) $-11 + (-9) = -20$
- 22) $0 - -7 = 7$
- 23) $10 - 13 = -3$
- 24) $-5 + (-4) = -9$
- 25) $-2 - 8 = -10$

Task 3 – Work out the following calculations.

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

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

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

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

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

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

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

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

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

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

44) Calculate:

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

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

$$= -46 - 2 + 3$$

$$= -45$$

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 °C. It dropped by 4°C, then rose by 9°C, to a final temperature of 2°C. What was the starting temperature?

Use inverse operations:

$$2 - 9 = -7$$

$$-7 + 4 = -3$$

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

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

Use inverse operations:

$$-10 + 62 = 52$$

$$52 - 35 = 17$$

$$x = £17$$