

Negative Numbers

A Continue these sequences:

- 1) -7, -6, -5, -4, -3, -2, __, __, __
- 2) 4, 3, 2, 1, 0, __, __, __
- 3) -6, -4, -2, __, __, __
- 4) -9, -6, -3, 0, __, __, __
- 5) -11, -6, -1, __, __, __

B Put these numbers in **ascending** order:

- 1) 1, 3, -3, -5, -7
- 2) -8, -3, 9, -7, 4
- 3) -11, 3, 7, -4, -8
- 4) -8, -2, 0, -12, 5
- 5) 8, -5, 15, -9, -12

C Put these numbers in **descending** order:

- 1) -7, 3, 6, -3, 2
- 2) 0, -6, 2, 8, -3
- 3) 2, 0, -7, -2, 9
- 4) 1, -7, 8, -11, 10
- 5) -14, 8, 15, -15, 7

D Put the correct symbol (< or >) between the two numbers:

- 1) -1 ? 7
- 2) 6 ? 2
- 3) -6 ? 0
- 4) 5 ? -2
- 5) -13 ? -3

E Write down which numbers could be included for these:

- 1) $x > 9$
- 2) $x \leq 8$
- 3) $x \geq -1$
- 4) $x < 0$
- 5) $x > 10$
- 6) $x \leq 7$
- 7) $x \geq 0$
- 8) $x < -1$

F Try these, you can use a number line to help you

- | | |
|---------------|----------------|
| 1) $-2 + 3 =$ | 6) $-3 + 4 =$ |
| 2) $3 - 8 =$ | 7) $4 - 7 =$ |
| 3) $-5 + 5 =$ | 8) $-6 + 4 =$ |
| 4) $1 - 3 =$ | 9) $0 - 2 =$ |
| 5) $-2 - 6 =$ | 10) $-1 - 4 =$ |

G Try these, you can use a number line to help you

- | | |
|--------------|---------------|
| 1) $14 - 25$ | 5) $-11 + 21$ |
| 2) $2 - 19$ | 6) $15 - 17$ |
| 3) $-8 + 12$ | 7) $5 - 16$ |
| 4) $-5 + 3$ | 8) $9 - 14$ |

H Try these, you can use your number line to help you

- | | |
|----------------|------------------|
| 1) $5 + -6 =$ | 9) $0 - -4$ |
| 2) $0 + -3 =$ | 10) $-7 - -6 =$ |
| 3) $-1 + -2 =$ | 11) $6 + -5 =$ |
| 4) $6 + -4 =$ | 12) $-1 + -4 =$ |
| 5) $9 + -12 =$ | 13) $0 + -3 =$ |
| 6) $3 - -3 =$ | 14) $5 + -2 =$ |
| 7) $2 - -9 =$ | 15) $10 + -15 =$ |
| 8) $-1 - -5 =$ | 16) $0 - -4$ |
| 9) $2 - -3 =$ | 17) $-1 - -6$ |
| 10) $1 - -8 =$ | 18) $-6 - -9 =$ |

J Try these, remember the rules about multiplying with negative numbers:

- | | |
|----------------------------|-----------------------------|
| 1) $5 \times -2 =$ | 6) $4 \times -3 =$ |
| 2) $-6 \times 3 =$ | 7) $-7 \times 4 =$ |
| 3) $4 \times 7 =$ | 8) $3 \times 8 =$ |
| 4) $-3 \times -7 =$ | 9) $-4 \times -6 =$ |
| 5) $-1 \times 4 \times -3$ | 10) $-2 \times 3 \times -5$ |

K Try these:

- | | |
|---------------------------|----------------------------|
| 1) $15 \div -3 =$ | 6) $16 \div -8 =$ |
| 2) $-70 \div 10 =$ | 7) $-72 \div 9 =$ |
| 3) $28 \div 4 =$ | 8) $27 \div 3 =$ |
| 4) $-56 \div -7 =$ | 9) $-49 \div -7 =$ |
| 5) $60 \div -3 \div -5 =$ | 10) $48 \div -2 \div -4 =$ |

L Try these:

- | | |
|---------------------|----------------------|
| 1) $6 - 2 =$ | 11) $-25 \div 5 =$ |
| 2) $5 - 11 =$ | 12) $-6 + -3 =$ |
| 3) $-2 \times -3 =$ | 13) $-6 \times -7 =$ |
| 4) $5 \times -6 =$ | 14) $36 \div 9 =$ |
| 5) $-2 - 4 =$ | 15) $18 - 32 =$ |
| 6) $3 + -6 =$ | 16) $50 \div -5 =$ |
| 7) $-2 - 6 =$ | 17) $-5 + -4 =$ |
| 8) $18 \div -3 =$ | 18) $-17 - 8 =$ |
| 9) $5 - 9 =$ | 19) $3 \times -2 =$ |
| 10) $-5 - -7 =$ | 20) $-7 \times -5 =$ |

Negative Number Questions

Midday temperatures in different towns are shown below:

Axminster	-6 °C
Bodmin	10 °C
Canford	-1 °C
Dunster	3 °C
Eetown	-3 °C

- Which town has the highest temperature?
- Which town has the lowest temperature?
- What is the difference in temperature between Canford and Bodmin?
- How much warmer in °C is Dunster than Eetown?
- How much colder in °C is Axminster than Canford?
- Next day, the temperature in Dunster has decreased by 6°C. What is its temperature after the decrease?
- The temperature in Fintown is 10°C warmer than Axminster. What is the temperature in Fintown?
- The temperature in Jeetown is 7°C colder than in Bodmin what is the temperature in Jeetown?

Level 1

- 1.) Susan had £5 in the bank. She spent £10 on shoes. By how much was she overdrawn?
- 2.) At 6am, the temperature in Eastbourne was -2°C . By 2pm it had risen by 6°C . What was the temperature in Eastbourne now?
- 3.) How much debt would I be in if I spent £15 but only have £10 in the bank?
- 4.) If it is -20°C in Canada and 10°C in Australia, what is the difference in temperature?
- 5.) Jessica was given £20 for her birthday. She bought a pair of shoes for £25. How much debt was she in?
- 6.) Reece's house had a temperature of 12°C . He put the heating on and the temperature rose by 8°C . What was the temperature in the house now?
- 7.) Mr and Mrs Smith had £18 in their bank account. At the end of the month they had to pay three bills. Their telephone bill was £6, their gas bill was £5 and their electricity bill was £9. How much debt were Mr and Mrs Smith in?
- 9.) Martin had £50 in the bank. He had to spend £54 on his car. What was the total of his debt?
- 10.) Rebecca made a cup of tea with a temperature of 90°C . She left it to cool, but forgot about it for 20 minutes, which meant that its temperature dropped by 40°C . She decided to reheat her tea in the microwave which increased its temperature by 20°C , and then she drank it. How hot was her tea at the point of drinking?

11.) Midday temperatures in different towns are shown below:

A town	-4°C
B town	5°C
C town	-3°C
D town	-6°C
E town	6°C

- (a) Which town has the highest temperature?
- (b) Which town has the lowest temperature?
- (c) What is the difference in temperature between C Town and B town?
- (d) How much warmer in $^{\circ}\text{C}$ is E town than D town?
- (e) How much colder in $^{\circ}\text{C}$ is D town than A town?
- (f) Next day, the temperature in E town has decreased by 7°C . What is its temperature after the decrease?
- (g) The temperature in F town is 10°C warmer than A town. What is the temperature in F town?

The temperature in J town is 7°C colder than in B town what is the temperature in J town?

Level 2

- 1.) Susan had £40 in the bank. She spent £65 on shoes. By how much was she overdrawn?
- 2.) At 6am, the temperature in Eastbourne was -2°C . By 2pm it had risen by 6°C . What was the temperature in Eastbourne now?
- 3.) How much debt would I be in if I spent £35 but only have £28 in the bank?
- 4.) If it is -26°C in Canada and 34°C in Australia, what is the difference in temperature?
- 5.) Jessica was given £80 for her birthday. She bought a pair of shoes for £55 and a pair of jeans for £43. How much debt was she in?
- 6.) Reece's house had a temperature of 12°C . He put the heating on and the temperature rose by 8°C . As he was still cold, Reece decided to light a fire which increased the temperature by a further 13°C . What was the temperature in the house now?
- 7.) Mr and Mrs Smith had £367 in their bank account. At the end of the month they had to pay three bills. Their telephone bill was £96, their gas bill was £203 and their electricity bill was £145. How much would Mr and Mrs Smith need to pay into their account to clear their overdraft?
- 8.) Martin was £56 overdrawn. He had to spend £234 on his car. What was the total of his debt now?
- 9.) Rebecca made a cup of tea with a temperature of 90°C . She left it to cool, but forgot about it for 20 minutes, which meant that its temperature dropped by 74°C . She decided to reheat her tea in the microwave which increased its temperature by 58°C , and then she drank it. How hot was her tea at the point of drinking?

Negative Number Questions

1. Midday temperatures in different cities are shown below:

Cities	$^{\circ}\text{C}$
Liverpool	- 8
London	6
Glasgow	-10
Cardiff	4
Nottingham	2

- a) Which city has the highest temperature?
- b) Which city has the lowest temperature?
- c) What is the difference in temperature between Glasgow and Cardiff?
- d) How much warmer in $^{\circ}\text{C}$ is Cardiff than Liverpool?
- e) How much colder in $^{\circ}\text{C}$ is Nottingham than London?
- f) Next day, the temperature in Cardiff has decreased by 5°C . What is its temperature after the decrease?
- g) The temperature in Cornwall is 10°C warmer than Liverpool. What is the temperature in Cornwall?
- h) Overnight, the temperature in Nottingham decreases by 5°C . What is its new temperature?
- i) The temperature in Birmingham is 5°C colder than in London. What is the temperature in Birmingham?
- j) What is the difference in temperature between Liverpool and Nottingham?

Level 3

- 1.) Susan had £43 in the bank. She spent £65 on shoes. By how much was she overdrawn?
- 2.) At 6am, the temperature in Eastbourne was -2°C . By 2pm it had risen by 19°C . What was the temperature in Eastbourne now?
- 3.) How much debt would I be in if I spent £235 but only have £128 in the bank?
- 4.) If it is -26°C in Canada and 34°C in Australia, what is the difference in temperature?
- 5.) Jessica was given £80 for her birthday. She bought a pair of shoes for £59.50 and a pair of jeans for £43.20. How much debt was she in?
- 6.) Reece's house had a temperature of 12°C . He put the heating on and the temperature rose by 8.4°C . As he was still cold, Reece decided to light a fire which increased the temperature by a further 13.8°C . What was the temperature in the house now?
- 7.) Mr and Mrs Smith had £367 in their bank account. At the end of the month they had to pay three bills. Their telephone bill was £96.40, their gas bill was £203.20 and their electricity bill was £145.30. How much would Mr and Mrs Smith need to pay into their account to clear their overdraft?
- 8.) Martin was £56.80 overdrawn. He had to spend £234.30 on his car. What was the total of his debt now?
- 9.) Rebecca made a cup of tea with a temperature of 90°C . She left it to cool, but forgot about it for 20 minutes, which meant that its temperature dropped by 74°C . She decided to reheat her tea in the microwave which increased its temperature by 58.7°C , and then she drank it. How hot was her tea at the point of drinking?

Negative Number Questions

2. Midday temperatures in different cities are shown below:

Cities	$^{\circ}\text{C}$
Liverpool	- 8
London	6
Glasgow	-10
Cardiff	4
Nottingham	2

- k) Which city has the highest temperature?
- l) Which city has the lowest temperature?
- m) What is the difference in temperature between Glasgow and Cardiff?
- n) How much warmer in $^{\circ}\text{C}$ is Cardiff than Liverpool?
- o) How much colder in $^{\circ}\text{C}$ is Nottingham than London?
- p) Next day, the temperature in Cardiff has decreased by 5°C . What is its temperature after the decrease?
- q) The temperature in Cornwall is 10°C warmer than Liverpool. What is the temperature in Cornwall?
- r) Overnight, the temperature in Nottingham decreases by 5°C . What is its new temperature?
- s) The temperature in Birmingham is 5°C colder than in London. What is the temperature in Birmingham?
- t) What is the difference in temperature between Liverpool and Nottingham?