

Foundation GCSE: Negative Numbers Practice

Name: _____

Class: _____

Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (20). Working out should be shown where appropriate.

1. Calculate: $-3 + 5$
2. Calculate: $4 - 7$
3. Calculate: $-2 - 6$
4. Calculate: $-8 + 3$
5. Calculate: $(-4) \times 3$
6. Calculate: $(-15) \div 3$
7. Calculate: $-5 - (-2)$
8. Calculate: $6 - (-4)$
9. Calculate: $(-6) \times (-2)$
10. Calculate: $(-24) \div (-4)$
11. Work out the value of -3^2
12. Work out the value of $(-3)^2$
13. Calculate: $-7 + 12 - 9$
14. Calculate: $-4 \times 5 + (-2)$
15. Insert the correct symbol ($<$, $>$, or $=$) between: $-8 \dots -5$
16. The temperature at midnight was -4°C . By midday, the temperature had risen by 7°C . What was the temperature at midday?
17. Calculate: $\frac{-18 + 6}{-2}$
18. Work out: $(-2)^3 - (-4)^2$
19. Find the missing number in the sequence: $-17, -13, -9, -5, \dots$. What is the 10th term?
20. Calculate: $\frac{-5 \times (-6) - 10}{-2 + (-3)}$

Answers & Worked Solutions

1. 2
Start at -3 on the number line and move 5 units right.
2. -3
Start at 4 and move 7 units left to cross zero.
3. -8
Combining two negative quantities: $-2-6 = -8$.
4. -5
 $-8+3$: moving right from -8 gets you closer to zero.
5. -12
Negative $\times$ positive gives a negative: $4 \times 3 = 12$.
6. -5
Negative $\div$ positive gives a negative: $15 \div 3 = 5$.
7. -3
Subtracting a negative is the same as adding: $-5 + 2$.
8. 10
Subtracting a negative becomes addition: $6 + 4 = 10$.
9. 12
Negative $\times$ negative gives a positive: 6×2 .
10. 6
Negative $\div$ negative gives a positive: $24 \div 4$.
11. -9
Exponents apply only to 3 here: $-(3^2) = -9$.
12. 9
The brackets mean $(-3) \times (-3) = +9$.
13. -4
Work left to right: $-7 + 12 = 5$, then $5 - 9 = -4$.
14. -22
Multiply first: -20 , then add -2 to get -22 .
15. $<$
 -8 is further to the left on the number line than -5 .
16. 3°C
 $-4 + 7 = 3$, moving up from below zero.
17. 6
Numerator: $-18 + 6 = -12$. Then $\frac{-12}{-2} = 6$.
18. -24
 $(-2)^3 = -8$ and $(-4)^2 = 16$. So, $-8 - 16 = -24$.
19. 19
Common difference is $+4$. 10th term: $-17 + 9(4) = 19$.
20. -4
Numerator: $30 - 10 = 20$. Denominator: -5 . $\frac{20}{-5} = -4$.