

## Negative Numbers & Integers: Medium Practice Paper 7 Answers

| Q# | Answer | Explanation                                                                                                                                                                                                  |
|----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | B      | Adding a negative number is the same as subtracting, so this is $6 - 14$ . Counting down 14 from 6 passes zero and reaches -8.                                                                               |
| 2  | A      | Starting at -13 and taking away 8 moves further below zero, from 13 below to 21 below. The answer is -21.                                                                                                    |
| 3  | E      | The Salt Flat is at -25 m, and 40 m higher means counting up 40 from there. That reaches 15 m, which is the height of the Ridge.                                                                             |
| 4  | E      | The first four all come to -12: a negative times a positive is negative, $-20 + 8$ climbs to -12, $-5 - 7$ drops to -12, and a positive divided by a negative is negative. But $-15 + 4$ climbs only to -11. |
| 5  | B      | From 20:00 to 00:00 is 4 hours, so the total fall is $4 \times 2 = 8$ degrees. Starting at 1 and dropping 8 passes zero and lands on $-7^{\circ}\text{C}$ .                                                  |
| 6  | C      | Each term is 6 less than the one before, and the 7th term is six steps after the first, so $6 \times 6 = 36$ has been taken away from 14. Counting 36 down from 14 gives -22.                                |
| 7  | B      | First work out $3a$ , which is $3 \times (-5)$ , giving -15. Then adding 4 climbs from -15 to -11.                                                                                                           |
| 8  | A      | The difference is the number of steps between the two numbers on a number line. From -4 up to 0 is 4 steps and from 0 up to 5 is 5 more, so $4 + 5 = 9$ .                                                    |
| 9  | C      | Going down 5 floors from floor 2 passes the ground floor and reaches floor -3. Going up one floor from there gives floor -2.                                                                                 |
| 10 | C      | Put them in order first: -9, -7, -4, 0, 2. The median is the middle one of the five, which is -4. (The value -3.6 is the mean, not the median.)                                                              |
| 11 | C      | Goal difference is goals scored take away goals let in. The Greens scored 15 and let in 19, which is 4 fewer scored than let in, so their difference is -4. The others come to 3, -3, 0 and 2.               |

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| 12 | A | Adding a negative moves to the left along the number line, so the answer is always below where you started. Subtracting a negative moves right, two negatives multiplied or divided give a positive, and zero is neither positive nor negative. |
| 13 | A | Take 9 away from both sides. Counting 9 down from -4 gives -13, so $x$ is -13. Check: $-13 + 9$ gives -4.                                                                                                                                       |
| 14 | B | Rising 25 m from -60 m brings the submarine up to -35 m. Diving 40 m from there takes it down to -75 m.                                                                                                                                         |
| 15 | D | Count in two stages, as on a number line. From -200 up to 0 is 200 years, and from 0 up to 150 is 150 more, so $200 + 150 = 350$ years.                                                                                                         |