Negative Numbers & Integers: Hard Practice Paper 8 Answers

Q#	Answer	Explanation
1	E	Two negative numbers multiplied together give a positive answer, and 15 × 4 = 60, so the answer is 60.
2	D	A negative divided by a negative gives a positive answer. Since 9 × 14 = 126, the answer is 14.
3	C	Division comes first, and a positive divided by a negative is negative, so 30 ÷ (−5) gives −6. Subtracting −8 is the same as adding 8, and counting 8 up from −6 reaches 2.
4	C	The negative readings come to 9 + 2 + 6 + 2 = 19 below zero and the one positive reading is 4, so the total is 15 below zero. Then −15 shared between the 5 nights gives −3°C.
5	D	The difference is 57 take away −89, and subtracting a negative is the same as adding, so 57 + 89 = 146 degrees.
6	B	Doubling a negative number keeps it negative and takes it further below zero. The terms run −2, −4, −8, −16, −32 and then −64, so the 6th term is −64.
7	D	First xy is −3 × (−5), which gives 15 because two negatives make a positive. Subtracting x means subtracting −3, which is the same as adding, so 15 + 3 = 18.
8	A	Each negative factor flips the sign of the product, so the answer is negative only when the number of negative factors is odd. That means either one of them or all three, which is why neither of those alone must be true.
9	B	Take 7 from both sides: 22 − 7 = 15, so −3x is 15. Dividing 15 by −3 gives −5. Check: −3 × (−5) is 15, and 15 + 7 = 22.
10	A	Nadia is on floor −2, and seven floors above that means counting 7 up from −2, which reaches floor 5. The table shows Ali on floor 5.

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11	C	The range is the highest take away the lowest, so the highest number lies 20 above −13. Counting 13 up reaches zero and 7 more reaches 7, so the highest number is 7.
12	C	Diving for 8 minutes takes it 8 × 12 = 96 m below the surface, to −96 m. Rising 35 m from there brings it up to −61 m.
13	A	The midpoint sits halfway across and halfway up. From −5 to 3 is 8 steps, and 4 steps on from −5 reaches −1. From 2 down to −4 is 6 steps, and 3 steps down from 2 reaches −1. The midpoint is (−1, −1).
14	B	Work each one out: −4 × 3 gives −12, −7 − 6 gives −13, −20 + 4 gives −16 and 5 − (−3) gives 8. Only −18 ÷ 2, which gives −9, lands between −10 and 0.
15	B	Over 5 km the fall is 5 × 7 = 35 degrees. Starting at 12 and dropping 35 passes zero after 12 degrees and falls 23 further, so the temperature is −23°C.

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