Negative Numbers & Integers: Hard Practice Paper 6 Answers

Q#	Answer	Explanation
1	E	A negative number squared is positive, since −3 × (−3) gives 9. Subtracting a negative is the same as adding, so 9 + 3 = 12.
2	D	A negative divided by a negative gives a positive answer, and 84 ÷ 7 = 12, so the answer is 12.
3	C	Multiplication comes before subtraction, and 5 × (−3) gives −15. Taking away −15 is the same as adding 15, so counting 15 up from −7 reaches 8.
4	C	The positive readings come to 5 + 2 = 7 and the negative ones to 7 + 4 = 11 below zero, so the total is 4 below zero. Then −4 shared between the 4 readings gives −1°C.
5	C	The sequence goes down in sevens: after 2 come −5, −12, −19 and −26. The term −19 is still above −20, so the first one below it is −26.
6	D	A negative squared is positive, so p^2 is −4 × (−4), giving 16. Then 2q is 2 × 3 = 6, and 16 − 6 = 10.
7	A	Work each one out: −3 × (−8) gives 24 because two negatives make a positive, −12 − 10 gives −22, −30 + 5 gives −25, and −20 − (−3) is −20 + 3, giving −17. Only −4 × 6 comes to −24.
8	C	In five minutes she descends 5 × 4 = 20 m, taking her from −18 m down to −38 m. Rising 12 m from there brings her up to −26 m.
9	B	Add 4 to both sides. Counting 4 up from −29 gives −25, so 5x is −25. Then −25 shared into 5 equal parts gives −5. Check: 5 × (−5) is −25, and taking 4 more away gives −29.
10	D	The range is the highest number take away the lowest. The highest is 12 and the lowest is −16, and subtracting a negative is adding, so 12 + 16 = 28.

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11	D	Distance from normal takes no notice of whether the level is above or below, so compare 40, 25, 55, 60 and 15. The largest of these is the 60 cm in April.
12	C	From 22:00 to 04:00 is 6 hours, so the fall is 6 × 2 = 12 degrees, taking 3°C down to −9°C. A rise of 5 degrees from there reaches −4°C.
13	A	The product is negative, so one number is positive and the other negative. Of the pairs that multiply to 36, only 4 and −9 also add correctly, since 4 − 9 gives −5.
14	A	Numbers get smaller as you move left along the number line, and −7 sits five steps to the left of −2. For negative numbers, being further from zero makes a number smaller, not larger.
15	D	Measure in two stages through sea level. From −47 m up to 0 is 47 m, and from 0 up to 34 m is 34 m more, so the distance is 47 + 34 = 81 m.

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