KS2.M-Y5N1 Place Value to 1000000 and Negative Numbers

Total Marks

Calculators not allowed · about 50 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 In the number 482,316 what is the value of the digit 8?

(1)

2 Write 709,045 in words.

(1)

3 What is 1,000 more than 253,489? What is 10,000 less than your answer?

(2)

4 A thermometer shows -3 degrees at 7 am and 5 degrees at 2 pm. By how many degrees did the temperature rise?

(2)

5 Place these numbers on a number line from smallest to largest: -12, 0, 5, -3, 12. Write them in order.

(2)

6 What is the digit in the tens place of 907,634? What is the value of that digit?

(2)

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7 Round 346,799 to the nearest 1,000. Then round your answer to the nearest 10,000.

(2)

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8 A shop had 12,450 pencils. They sold 3,275 pencils. How many pencils are left?

(2)

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9 Write the smallest and largest 6-digit numbers you can make using the digits 4, 0, 8, 1, 9, 2 each once.

(2)

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10 A ferry crosses a river in 28 minutes. If it leaves at 10:14, what time does it arrive? If the return trip takes 33 minutes and it leaves immediately, what time does it arrive back?

(2)

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11 Explain why 0 is neither positive nor negative. Give one sentence as your explanation.

(2)

12 Complete the sequence counting through zero: -7, -4, -1, 2, __, __. Continue the pattern for two more terms.

(2)

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13 What is the result of 200,000 + 65,432?

(1)

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14 A mountain hut is at 1,320 m above sea level. A valley nearby is at -85 m. What is the difference in height between the hut and the valley?

(2)

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15 Write these numbers in order from largest to smallest: 450,000; 45,000; 4,500; 405,000.

(2)

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16 A parking meter shows -2 hours when it runs out. If a car is parked for 7 hours and the meter decreases by 1 each hour, what number will the meter show after the 7 hours? Start from 0.

(2)

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17 Explain your answer: Two buildings are at heights of -12 m and 18 m relative to sea level. Which is further from sea level? Describe how you decide and give the distances.

(3)

18 Sofia says that when you round 555,499 to the nearest 10,000 you get 560,000. Explain whether she is correct and show your working.

(3)

Mark scheme · KS2.M-Y5N1 Place Value to 1000000 and Negative Numbers

Question 1

- **B1** 80,000 cao
- Answer: **80,000**

Question 2

- **B1** seven hundred and nine thousand and forty-five oe
- Answer: **seven hundred and nine thousand and forty-five**

Question 3

- **M1** correct addition to get 254,489 or clear method
- **A1** 244,489 cao
- Answer: **244,489**

Question 4

- **M1** correct method for difference using zero or subtraction, e.g. -3 to 0 = 3, 0 to 5 = 5
- **A1** 8 cao
- Answer: **8**

Question 5

- **M1** partial order with at least three correct positions
- **A1** -12, -3, 0, 5, 12 cao
- Answer: **-12, -3, 0, 5, 12**

Question 6

- **B1** tens digit identified as 3
- **B1** value given as 30 cao
- Answer: **3; 30**

Question 7

- **M1** correct rounding to 347,000 or clear method
- **A1** 350,000 cao
- Answer: **350,000**

Question 8

- **M1** correct subtraction method shown
- **A1** 9,175 cao
- Answer: **9,175**

Question 9

- **B1** smallest correctly given as 102,489 cao
- **B1** largest correctly given as 984,210 cao
- Answer: **102,489; 984,210**

Question 10

- **M1** correct time addition for outward trip
- **A1** 10:42 and 11:15 cao
- Answer: **10:42; 11:15**

Question 11

- **M1** statement that 0 is the point between positive and negative numbers or has no sign
- **A1** clear reason, e.g. numbers greater than 0 are positive and less than 0 are negative, so 0 is neither cao
- Answer: **0 is the boundary on a number line between positive and negative numbers, so it is neither positive nor negative.**

Question 12

- **M1** recognition of pattern increasing by 3 each step
- **A1** 5 and 8 cao
- Answer: **5, 8**

Question 13

- **B1** 265,432 cao
- Answer: **265,432**

Question 14

- **M1** correct method using subtraction across zero, e.g. 1,320 + 85
- **A1** 1,405 cao
- Answer: **1,405**

Question 15

- **M1** at least two numbers correctly placed or correct reasoning
- **A1** 450,000; 405,000; 45,000; 4,500 cao
- Answer: **450,000; 405,000; 45,000; 4,500**

Question 16

- **M1** correct subtraction or counting through zero shown
- **A1** -7 cao
- Answer: **-7**

Question 17

- **M1** distance from sea level for one building calculated correctly, e.g. 18 for the positive one or 12 for the negative one
- **M1** distance for the other building calculated correctly
- **A1** clear statement that 18 m is further because 18 > 12 cao
- Answer: **The building at 18 m is 18 m from sea level and the one at -12 m is 12 m from sea level, so the 18 m building is further from sea level.**

Question 18

- **M1** shows rounding to nearest 10,000 with consideration of thousands digit (555,499 -> consider 5 in thousands)
- **M1** correct intermediate rounded to nearest 10,000 as 555,000 or explanation equivalent
- **A1** clear conclusion that Sofia is correct because 555,499 rounds to 560,000 cao
- Answer: **Sofia is correct; 555,499 rounded to the nearest 10,000 is 560,000.**