1.1 Reasoning: Number and Place Value: Test Pack

STA KS2 National Curriculum Mathematics - STA Reasoning Test Framework · Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The number 3,758 is shown. State the value of the digit 7.

(1)

---

2 Insert the correct symbol, < , > or = , between each pair of numbers.

(a) 5,672 ___ 5,627 **(1)**

(b) 12,905 ___ 12,950 **(1)**

---

3 Circle the greatest number in this list: 3,099 3,909 3,990 3,190

(1)

---

4 In Roman numerals, the year King Henry VIII became king of England is written MDIX. His daughter Elizabeth I became queen 49 years later.

(a) Write MDIX as a number. **(1)**

(b) Write the year Elizabeth I became queen as a Roman numeral. **(2)**

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5 A submarine is at a depth of 85 metres below sea level, recorded as -85 m. It rises 128 metres, then dives a further 46 metres. What is the submarine's final position relative to sea level? Give your answer as a positive or negative number of metres.

(3)

---

6 Show that 8,452 rounds to 8,450 when rounded to the nearest 10, and rounds to 8,500 when rounded to the nearest 100.

(3)

---

7 The sum of 4 consecutive numbers is 18.

What is the smallest of the 4 numbers?

Answer: ___

(2)

---

8 Complete the partition.

620,442 = 600,000 + ___ + 400 + 40 + 2

Answer: ___

(1)

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9 What is 10,000 more than 500,394?

Answer: ___

(1)

---

10 List all the factors of 36.

(2)

---

11 Write these numbers in order, starting with the largest.

639,626, 618,330, 662,025, 606,885

Answer: ___

(1)

---

12 What is 10 more than 266,967?

Answer: ___

(1)

---

13 Order these temperatures from coldest to warmest: -8, 3, -2, 0, -5 (degrees Celsius)

(2)

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14 Write these numbers in order, starting with the smallest.

898,497, 897,013, 949,860, 902,327

Answer: ___

(1)

---

15 Uma has 9 boxes with 521 cards in each box and 702 loose cards.

How many cards does Uma have altogether?

Answer: ___

(2)

---

16 Estimate 9,067 - 7,144 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

---

17 Yusuf has 4,262 stickers. Yusuf puts 2,078 aside and shares the rest equally between 6 friends.

How many stickers does each friend get?

Answer: ___

(2)

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18 Round 666,247 to the nearest thousand.

Answer: ___

(1)

---

19 Write <, > or = in the box.

54,414 [ ] 54,156

Answer: ___

(1)

---

20 Find the missing number in this sequence.

3,465, 3,215, 2,965, 2,715, 2,465, ___

Answer: ___

(1)

---

21 Use each of the digits 4, 8, 5, 9 once to make the smallest possible 4-digit number.

Answer: ___

(2)

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22 Complete each calculation.

(a) 34 x 100 = **(1)**

(b) 8500 / 100 = **(1)**

(c) 6.3 x 1000 = **(1)**

(d) 720 / 10 = **(1)**

---

23 A number line starts at 0 and goes up in equal steps of 100,000. An arrow points to the 4th mark after the start.

What number does the arrow show?

Answer: ___

(1)

---

24 Estimate 7,995 - 3,293 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

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25 The temperature at 6am was -4 degrees Celsius. By midday the temperature had risen by 9 degrees Celsius. What was the temperature at midday?

(2)

---

26 What is the value of the digit 5 in 591,760?

Answer: ___

(1)

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Mark scheme · 1.1 Reasoning: Number and Place Value: Test Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

700 oe (accept 7 hundreds); cao **B1**

Answer: **700**

Question 2

(a) > cao **B1**

(a) Answer: **>**

(b) < cao **B1**

(b) Answer: **<**

Question 3

3,990 cao **B1**

Answer: **3,990**

Question 4

(a) 1509 cao **B1**

(a) Answer: **1509**

(b) 1509 + 49 = 1558 seen oe **M1**

(b) MDLVIII cao **A1**

(b) Answer: **MDLVIII**

Question 5

-85 + 128 (= 43) oe **M1**

candidate's value from first step - 46, dependent on first M1 **dM1**

-3 (i.e. 3 m below sea level) cao **A1**

Answer: **-3 m (3 m below sea level)**

Question 6

identifies the ones digit of 8,452 is 2, which is less than 5 **M1**

identifies the tens and ones digits of 8,452 are 52, which is 50 or more **M1**

cso: correctly concludes 8,452 rounds to 8,450 (nearest 10) and to 8,500 (nearest 100), both shown with reasoning **A1**

Answer: **Shown: 8,452 rounds to 8,450 (nearest 10) and 8,500 (nearest 100)**

Question 7

uses the mean or tests numbers **M1**

3 cao **A1**

Answer: **3**

Question 8

20,000 cao **B1**

Answer: **20,000**

Question 9

510,394 cao **B1**

Answer: **510,394**

Question 10

at least 6 correct factors listed with no incorrect values **M1**

1, 2, 3, 4, 6, 9, 12, 18, 36 cao, any order **A1**

Answer: **1, 2, 3, 4, 6, 9, 12, 18, 36**

Question 11

662,025, 639,626, 618,330, 606,885 cao **B1**

Answer: **662,025, 639,626, 618,330, 606,885**

Question 12

266,977 cao **B1**

Answer: **266,977**

Question 13

at least three values placed in correct relative order **M1**

-8, -5, -2, 0, 3 cao **A1**

Answer: **-8, -5, -2, 0, 3**

Question 14

897,013, 898,497, 902,327, 949,860 cao **B1**

Answer: **897,013, 898,497, 902,327, 949,860**

Question 15

9 x 521 = 4,689 seen **M1**

5,391 cao **A1**

Answer: **5,391**

Question 16

9,000 and 7,000 seen **M1**

2,000 cao **A1**

Answer: **2,000**

Question 17

2,184 seen **M1**

364 cao **A1**

Answer: **364**

Question 18

666,000 cao **B1**

Answer: **666,000**

Question 19

> cao **B1**

Answer: **>**

Question 20

2,215 cao **B1**

Answer: **2,215**

Question 21

digits placed in value order **M1**

4,589 cao **A1**

Answer: **4,589**

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Question 22

(a) 3400 cao **B1**

(a) Answer: **3400**

(b) 85 cao **B1**

(b) Answer: **85**

(c) 6300 cao **B1**

(c) Answer: **6300**

(d) 72 cao **B1**

(d) Answer: **72**

Question 23

400,000 cao **B1**

Answer: **400,000**

Question 24

8,000 and 3,000 seen **M1**

5,000 cao **A1**

Answer: **5,000**

Question 25

-4 + 9 seen oe **M1**

5 (degrees Celsius) cao **A1**

Answer: **5°C**

Question 26

500,000 cao **B1**

Answer: **500,000**

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