

# SA Mathematics Challenge 2015

## GRADE 4 FINAL ROUND

### 29 July 2015

#### NOTE:

- Answer the questions according to the instructions on the answer sheet.
- You may use a calculator.
- The questions test insight. Complex calculations will therefore not be necessary.
- We hope you enjoy it!

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1. What is the missing number in  $9\ 999 = 9000 + \underline{\quad} + 9$ ?

- (A) 909      (B) 999      (C) 990      (D) 99      (E) 9
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2. What are the next two figures in this pattern?

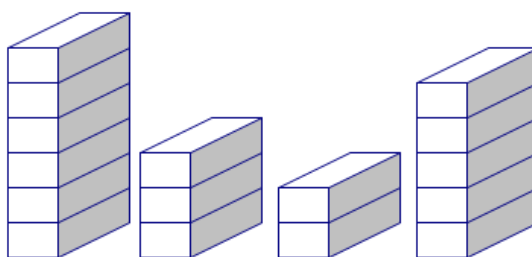


- (A) (B) (C) (D) (E)
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3. The first four leap years in the 21st century are 2000, 2004, 2008 and 2012. What will the seventh leap year in the 21st century be?

- (A) 2014      (B) 2015      (C) 2016      (D) 2020      (E) 2024
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4. If you may move one or more bars at a time, what is the minimum number of moves to make all four piles in this figure the same height?

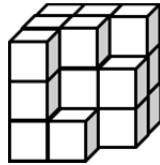


- (A) 1      (B) 2      (C) 3      (D) 4      (E) 5
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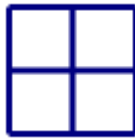
5. Adam counts in 3s and Jane counts in 4s. Both count up to 50. How many of their numbers will be the same?
- (A) 1                      (B) 2                      (C) 3                      (D) 4                      (E) 5

6. Thembi is using small cubes to build a bigger cube. How many small cubes does she need to complete her cube below?



- (A) 2                      (B) 3                      (C) 4                      (D) 5                      (E) 6

7. Mary has a square milk crate that can hold four bottles. In how many different ways can she put two milk bottles into the crate?



- (A) 2                      (B) 3                      (C) 4                      (D) 5                      (E) 6

8. The sketch below shows one way Jack can climb the beanstalk. He always climbs upwards. In how many different ways can Jack climb the beanstalk from the start to the top?



- (A) 2                      (B) 4                      (C) 6                      (D) 8                      (E) 10

9. Pick two numbers from the given numbers below. Add them together. Pick two other numbers and add them together. Keep doing it. How many different possible answers are there?



- (A) 24                      (B) 6                      (C) 8                      (D) 15                      (E) 16



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17. Jason divided a number by 6 instead of multiplying it by 6, and obtained 15 as answer. What is the correct answer?

- (A) 90      (B) 180      (C) 360      (D) 540      (E) 100
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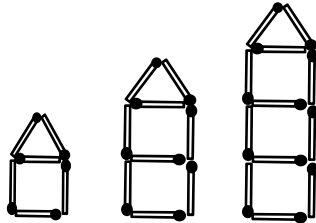
18. A clock is showing 09:58, where all digits are different. After how many minutes will all the digits be different again?

- (A) 1      (B) 2      (C) 13      (D) 14      (E) 25
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19. Manual must number the 100 room doors in a new hotel with plastic digits, from room 1 to room 100. How many digits 7 does he need?

- (A) 18      (B) 19      (C) 20      (D) 10      (E) 11
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20. Thandi builds houses with matches, e.g. with nine matches she can build a house with two storeys. How many matches does she need to build a house with ten storeys?



- (A) 30      (B) 32      (C) 33      (D) 35      (E) 36
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