

High School Mathematics Test 2013

Year
6/7

Whole Number Computation

Non Calculator
Test

Skills and Knowledge Assessed:

- Communicates and connects mathematical ideas using appropriate terminology, diagrams and symbols.
- Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers. (ACMNA123)
- Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)

Name _____

Write all answers in the spaces provided on this test paper.
Show working as needed in the space for the question.

1. Write the numeral for: *Two hundred and fifty seven thousand three hundred and eight.*

2. What is the place value of the digit 8 in the number 1 289 045?

☐ Hundreds

☐ Thousands

☐ Tens of thousands

☐ Hundreds of thousands

3. What is the number immediately before 12 000?

4. Write numbers in the boxes to count backward by fives from 23.

23

5. What is the single numeral for the number which is written as:

$$7 \times 100\,000 + 5 \times 10\,000 + 3 \times 100 + 9 \times 1$$

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6. Write the number 104 760 in expanded notation.

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7. Write these numbers in the boxes so that they are in ascending order.

123 345	234	21 134	231 341	454	3 421	43 213
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8. (a)
$$\begin{array}{r} 258 + \\ 4\,865 \\ \hline \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 6\,496 + \\ 7\,678 \\ 483 \\ 5\,867 \\ \hline \\ \hline \end{array}$$

9. (a)
$$\begin{array}{r} 7\,853 - \\ 4\,842 \\ \hline \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 28\,496 - \\ 9\,678 \\ \hline \\ \hline \end{array}$$

10. (a)
$$\begin{array}{r} 258 \times \\ 4 \\ \hline \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 6\,483 \times \\ 7 \\ \hline \\ \hline \end{array}$$

11. (a)
$$\begin{array}{r} 435 \times \\ 14 \\ \hline \\ \hline \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 5\,389 \times \\ 78 \\ \hline \\ \hline \\ \hline \end{array}$$

12. (a)
$$8 \overline{) 2\,648}$$

(b)
$$9 \overline{) 4\,761}$$

13.

(a) $25 \overline{) 2\,675}$

(b) $48 \overline{) 6\,528}$

14. Adam plays a game of darts. In five shots he scores 129, 26, 180, 65 and 101. What is his total score in the 5 shots?

15. There are 869 students at St Michaels High School, who are either juniors or seniors. There are 378 seniors. How many juniors are there?

16. An external disk drive has a capacity of 685 gigabytes. Johan buys 6 of these drives. What capacity do the drives have altogether?

17. Karina has read 237 pages of a book which has 621 pages. How many pages has she left to read?

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18. Patrice plays a game on her S-box game console. In 4 games she scores 8 529, 12 426, 234 180, and 23 402. What is her total score in the 4 games?

-
19. Carlyle has a population of 871 369 and Kintyre has a population of 1 089 234. How many more people live in Kintyre, than Carlyle?

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20. In a city there are 24 clubs which each have 376 members. How many members are there in the clubs altogether?

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21. Martine does a stocktake in the library and finds there are 28 346 books altogether. She also finds that 19 293 of the books are fiction titles. How many books are not fiction titles?

22. Daria is making cakes for an end of year party.
She has a recipe which requires 320 grams of flour, and she decides to make 3 times the amount of the recipe.
She buys two packets which each hold 750 grams of flour.
How much flour will remain after she has made the cakes?

23. Jason collects magazines from his brothers and sisters to distribute to nursing homes. The three brothers (including Jason) give 24 magazines each and his four sisters give 37 magazines each.
He divides the magazines evenly between five nursing homes.
How many magazines does he give to each?

24. Which of these methods could be used to calculate the answer to 9×37 ?

☐ $9 \times 3 + 9 \times 7$

☐ $9 \times 3 + 9 \times 70$

☐ $9 \times 30 + 9 \times 7$

☐ $9 \times 30 + 9 \times 70$

25. Write another calculation which could be used to help give the answer to 8×76 .

26. Which of the following is **not** correct?

☐ $747 \times 9 = 9 \times 747$

☐ $747 + 9 = 9 + 747$

☐ $9 \times 747 = 747 \times 9$

☐ $747 - 9 = 9 - 747$

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27. Which of the following is correct?

☐ $90 - (6 - 3) = (90 - 6) - 3$

☐ $90 \times (6 \times 3) = (90 \times 6) \times 3$

☐ $90 \div (6 \div 3) = (90 \div 6) \div 3$

☐ $90 \div (6 - 3) = (90 \div 6) - 3$

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28. Farin has to calculate the answer to the following $25 \times 438 \times 4$.
Which of these methods would be the quickest way to mentally calculate the correct answer?

☐ Multiply 4 by 25, then multiply this by 438.☐ Multiply 438 by 25, then multiply this by 4.☐ Multiply 4 by 438, then multiply this by 25.☐ Double 438, the double again, then multiply this by 25.

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29. Describe a quick way to find the answer to the following:
 $125 + 88 + 112 + 275$.

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30. Which of the following is **not** correct?

☐ $23 \times (16 - 8) = 23 \times 16 - 23 \times 8$

☐ $23 \times (16 + 8) = 23 \times 16 + 23 \times 8$

☐ $23 \times (8 - 16) = 23 \times 8 - 23 \times 16$

☐ $23 \div (16 - 8) = 23 \div 16 - 23 \div 8$

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31. Show a quick way to find the answer to $134 \times 69 - 134 \times 67$ and give the answer.

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32. Show a quick way to find the answer to $125 \times 69 \times 8 + 69 \times 250 \times 4$ and give the answer.

ANSWERS

Non Calculator Section										
1.	257 308									
2.	Tens of thousands									
3.	11 999									
4.	18, 13, 8, 3									
5.	750 309									
6.	$1 \times 100\,000 + 4 \times 1000 + 7 \times 100 + 6 \times 10$ or as powers of 10.									
7.	<table><tr><td>234</td><td>454</td><td>3 421</td></tr><tr><td>21 134</td><td>43 213</td><td>123 345</td></tr><tr><td>231 341</td><td></td><td></td></tr></table>	234	454	3 421	21 134	43 213	123 345	231 341		
234	454	3 421								
21 134	43 213	123 345								
231 341										
8.	(a) 5 123 (b) 20 524									
9.	(a) 3 011 (b) 18 818									
10.	(a) 1032 (b) 45 381									
11.	(a) 6 090 (b) 420 342									
12.	(a) 331 (b) 529									
13.	(a) 107 (b) 136									
14.	501									
15.	491 juniors									
16.	4 110 gigabytes									
17.	384 pages									
18.	278 537 points									
19.	217 865 more people									
20.	9 024 members									
21.	9 053 books									
22.	She needs 960 grams. She buys 1 500 grams. She has 540 grams left.									
23.	Brothers give 72 magazines.									

	Sisters give 148 magazines. This is a total of 220 magazines. There are 44 magazines given to each home.
24.	$9 \times 30 + 9 \times 7$
25.	$8 \times 70 + 8 \times 6$ others possible e.g. $76 \times 2 \times 2 \times 2$
26.	$747 - 9 = 9 - 747$
27.	$90 \times (6 \times 3) = (90 \times 6) \times 3$
28.	Multiply 4 by 25, then multiply this by 438.
29.	Answer = $125 + 88 + 112 + 275$ = $125 + 275 + 88 + 112$ = $400 + 200$ = 600
30.	$23 \div (16 - 8) = 23 \div 16 - 23 \div 8$
31.	Answer = $134 \times 69 - 134 \times 67$ = $134 \times (69 - 67)$ = 134×2 = 268
32.	Answer = $125 \times 69 \times 8 + 69 \times 250 \times 4$ = $125 \times 8 \times 69 + 250 \times 4 \times 69$ = $1000 \times 69 + 1000 \times 69$ = $69 \times (1000 + 1000)$ = 69×2000 = 138 000