Western Cape Government
Education

WCED
Mathematics
Question Paper 1
JUNE 2013

Name: _____
Grade 7: _____
Date: _____
Total: 55 marks Time: 60 minutes

A

LEARNING OUTCOME 1

1. **Circle the letter of the correct answer.**

1.1 What is the next number? 0,603 ; 0,602 ; 0,601 ; 0,6 ; _____ (1)

A 0,5
B 0,599
C 0,7
D 0,60

1.2 Round 3,175 off to one decimal place. (1)

A 3,17
B 3,1
C 3,18
D 3,2

1.3 $a \times (b + c) =$ (1)

A $a \times b \times c$
B $a \times b + a \times c$
C $a \times b + c$
D $a + b \times a + c$

1.4 $56 \div 8 \times 1 \times 0$ (1)

A 7
B 1
C 0
D 8

1.5 Which one shows the prime factors of the lowest common denominator in: (1)

$\frac{7}{12}$ and $\frac{5}{6}$?

A $2 \times 2 \times 3$
B 2×3
C $2 \times 6 + 2 \times 3$
D $2 \times 3 \times 3$

1.6 What is the difference between 8 and -8? (1)

A 0
B 8

C 16
D -16

2 **From the given group of numbers, choose one number that fits each of the descriptions below.**

21 ; 36 ; 111 ; EMBED Equation.3
; 19 ; 12 ; EMBED Equation.3

2.1 A prime number. _____ (1)

2.2 Improper fraction. _____ (1)

2.3 Smallest common denominator for $\frac{3}{4} and \frac{4}{3}$. _____ (1)

2.4 1 , 2 , 3 , 4 , 6 , 9 , 12 , 18 are factors of _____ (1)

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3 **True or False:**

3.1 $3^2 = 3 \times 2$ _____ (1)

3.2 The square of 100 is 10 _____ (1)

3.3 $3\frac{7}{14} = \frac{7}{2}$ _____ (1)

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4. One of your classmates really struggles with exponents and gave a wrong answer to the following problem: $2^3 \times 3^2 = 6^6$

4.1 What did he do wrong? (1)

_____

_____

4.2 What is the correct answer? _____ (1)

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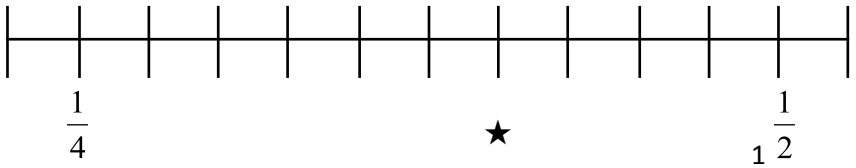
5. **Complete the following table:** (3)

PERCENTAGE	DECIMAL FRACTION	COMMON FRACTION
12%	**5.1** _____	$\frac{3}{25}$
5.2 _____	0,6	$\frac{3}{5}$
65%	0,65	**5.3** _____

6. **Determine the value of the ★** _____

6.1 ★ ÷ 4 = 36 ÷ 3 _____ (1)

6.2



(1)

_____

6.3

$$\begin{array}{cccccc} & 3 & \bigstar & 7 & 9 & \\ X & & & & & 7 \\ \hline 2 & 7 & 1 & 5 & 3 & \end{array}$$

(1)

_____

6.4 $7\frac{5}{6} = \frac{\bigstar}{6} + \frac{7}{6} = \frac{\bigstar}{6}$ (2)

____ ____

7. **Calculate the following:**

7.1 $5^2 + 2^4 =$ _____ (1)

7.2 $-5 + (-4) \times (-8) \div (-2) =$ _____ (1)

7.3 $3^2 \times 3^3\sqrt{25-9} =$ _____ (1)

7.4 $2\frac{3}{5}\frac{3}{5} + 1\frac{2}{3}\frac{2}{3} \times 1\frac{2}{5}\frac{2}{5}$ (5)

Show your method here.

LEARNING OUTCOME 2

8. What is the next number in the pattern

8.1 1 ; 1 ; 2 ; 3 ; 5 ; 8 ; 13 ; _____ (1)

8.2 356 ; 331 ; 306 ; 281 ; _____ (1)

9. Mrs Jones wrote the following number sequence on the board and asked her learners to guess her rule: 1 ; 3 ; 7 ; 15 ; 31 ; ... (1)
If the pattern continues in the same way, which rule did she use?

_____

_____

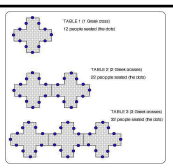
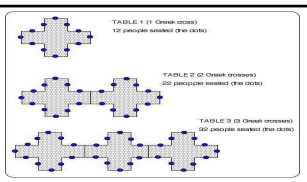
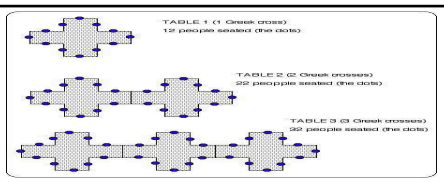
10. Mr Peters has asked his learners to form a sequence using the following rules: (1)

- Use the number 5 as a first term
- To find the next terms, double the previous term and subtract 2

If the second term in this pattern is 8, the 5th term will be _____ .

11. What is the missing number in this pattern? 1 ; 8 ; 27 ; _____ ; 125 (1)

12. The organisers of a sports dinner are hiring tables in the shape of a cross. For each table they place side by side, they lose two seats.

		
1 table = 12 seats	*2 tables = 22 seats*	*3 tables = 32 seats*

12.1 Complete the table. (2)

Tables	1	2	3	5	
Seats	12	22	32		102

12.2 Write a rule that you can use to find the number of tables if 202 seats are used. (1)

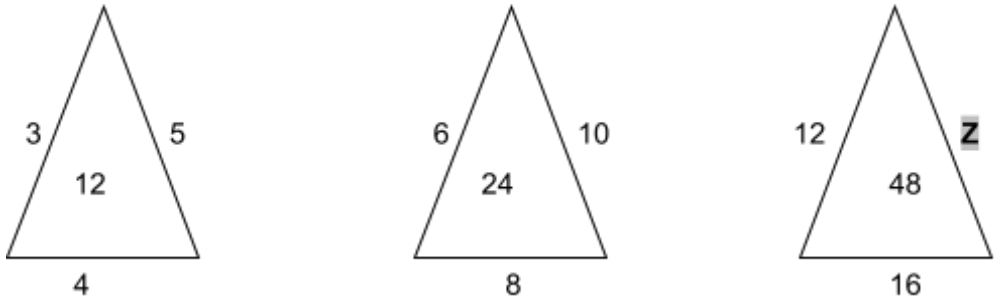
_____

_____

12.3 Write a rule to calculate ***n*** number of seats. (1)

_____

13 What is the value of **Z** in the diagram below? (1)

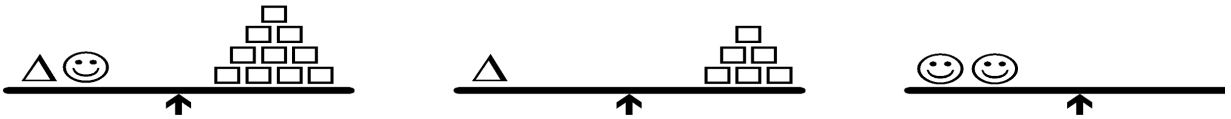


Z =

14 (1)

If  = 65, then  = _____.

15 The sketch shows three ways in which certain objects can be balanced. How many 💰 s are needed to balance the two ☺ s ? _____ (1)



16 **Circle the letter of the correct answer.**

16.1 Which of the following equations has the same solution as the equation **2** x **+ 6 = 32?** (1)

A $(x - 3) = 16$
B $x - 3 = 16$
C $x + 6 = 16$
D $2(x + 3) = 32$

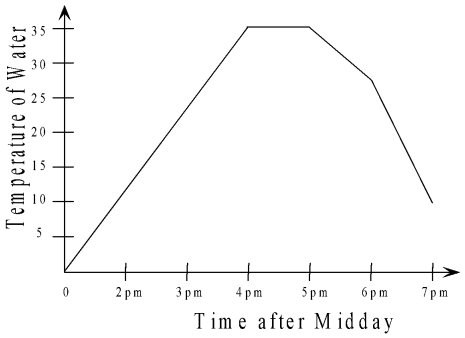
16.2 If $15 + 3x = 42$, then the value of x is (1)

A 9
B 11
C 12
D 14

16.3 ¼ of x is 36. x is equal to: (1)

A 9
B 50
C 144
D 40

16.4 The graph below represents the temperature of the water in a spa bath as measured from midday, when the bath was switched on, up to 7pm. What is happening with the temperature of the water from 4pm to 5pm? (1)



A The temperature is constant
B The temperature is increasing
C The temperature is 35°
D The temperature is decreasing

16.5 $\frac{2a}{3}$ - 3 = 7 a = _____ (1)

A 10
B 15
C 3
D 6

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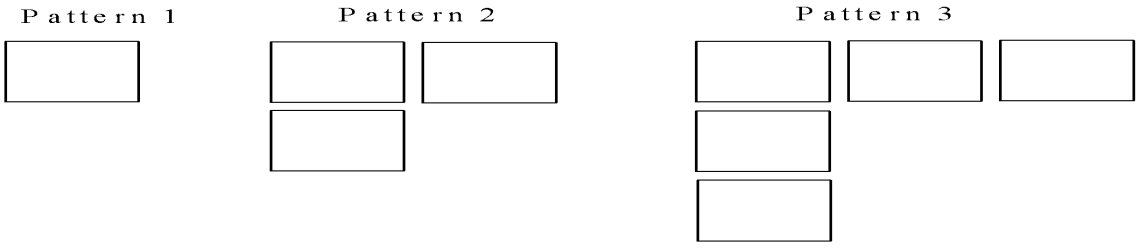
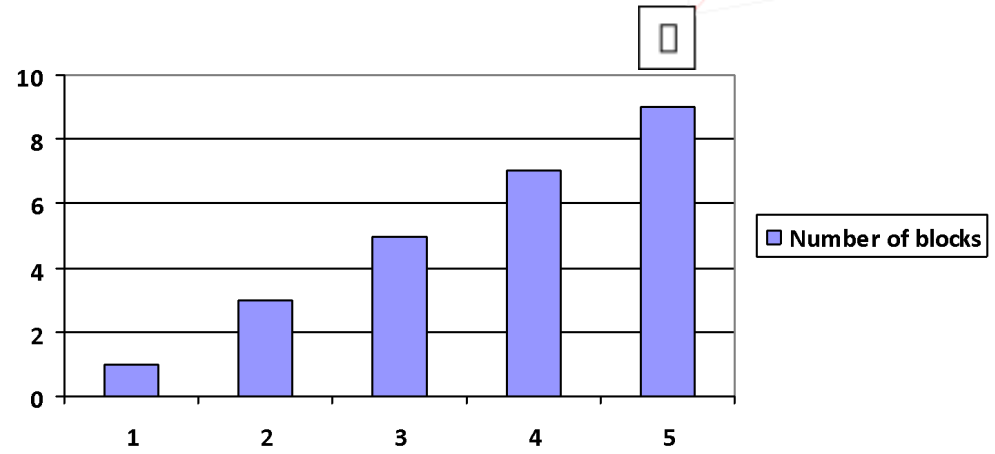
17 **Mark True or False in the block**:

The two algebraic expressions $2 \div x \div y$ and $2 \times x \times y$ are equal for all values. (1)

True	
False	

18 The graph below represents the following pattern. Compare the two and complete the questions.



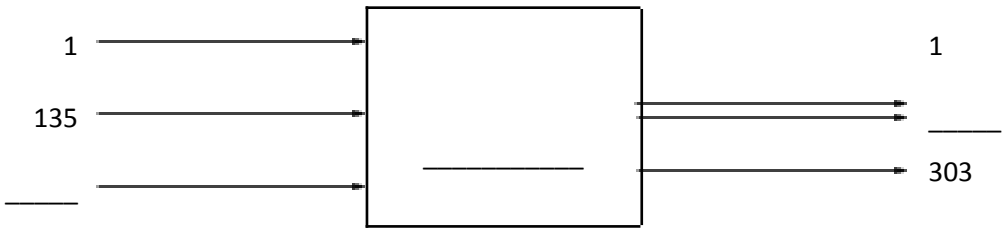


18.1 What is the next number in the pattern? 1 ; 3 ; 5 ; 7 ; 9 ; _____ (1)

18.2 Complete the table. (2)

Input (pattern number)	**Output** (number of blocks)
1	1
2	3
3	5
	7
6	

18.3 Use the information above and complete the flow diagram. (3)



TOTAL : 55 MARKS