Class/Homework

SHOW WORK

Mid Unit Review

Page 69

Questions

1,2ade, 4,5,6,8,9,10

2.1

1. Write each power in standard form.

a) 14^2 b) 5^1 c) -8^3

d) $-(-4)^4$ e) $(-6)^3$ f) $(-2)^8$

2. Copy and complete this table.

	Power	Base	Exponent	Repeated Multiplication	Standard Form
a)	4^3				
b)	2^5				
c)	8^6				
d)		7	2		
e)				$3 \times 3 \times 3 \times 3$	

3. a) Evaluate the first 8 powers of 7. Copy and complete this table.

Power of 7	Standard Form
7^1	
7^2	
7^3	
7^4	
7^5	
7^6	
7^7	
7^8	

b) What pattern do you see in the ones digits of the numbers in the second column?

c) Verify that the pattern continues by extending the table for as many powers of 7 as your calculator displays.

d) Use the pattern. Predict the ones digit of each power of 7. Explain your strategy.

i) 7^{12} ii) 7^{14}

iii) 7^{17} iv) 7^{22}

4. Write in standard form.

a) 10^6 b) 10^0 c) 10^8 d) 10^4

c) 100 d) 100 000

5. Write as a power of 10.

a) one billion b) one

6. Evaluate.

a) $(-5)^0$ b) 25^0 c) -6^0 d) 9^0

7. The area of land is measured in hectares (ha). One hectare is the area of a square with side length 100 m. Write the number of square metres in 1 ha as a power.

8. Evaluate. State which operation you do first.

a) $(-21 - 6)^2 + 14$

b) $6 \div (-2) + (2 \times 3)^2$

c) $[5 - (-4)]^3 - (21 \div 7)^4$

d) $[(6 - 21)^3 \times (2 + 2)^6]^0$

e) $(3 - 5)^5 \div (-4)$

f) $-30 - (7 - 4)^3$

9. Both Sophia and Victor evaluated this expression: $-2^4 \times 5 + 16 \div (-2)^3$
Sophia's answer was -82 and Victor's answer was 78. Who is correct? Find the likely error made by the other student.

10. Identify, then correct, any errors in the student work below. How do you think the errors occurred?