MATH 1314.003 Skills Assessment 5.1 Name: Key

There are 5 questions. Full credit is awarded only if at least four of five questions are completely correct. You may not use notes, books, calculators etc. The assessment may be retaken twice.

1. Simplify the following expression: $(2^3\ 3^2)^2$ $= 2^6 \cdot 3^4 = (1^2) = (8 \cdot 9)^2 = 72^2$

32 · 2 = 64 72 · 72 = 144 504

Answer: 5184

2. Simplify the expression $(-8)^{\left(\frac{4}{3}\right)}$

$= ((-8)^{1/3})^4 - (-2)^4$

Answer: 16

3. Simplify the expression $5^{2x}\ (5^{-x})$ where x is not specified.

$= 5^{2x\ -x}$

$= 5^x$

Answer: 5^x

4. Find the value of the exponential function $y = 2*3^{(x+1)}$ at $x = 2$.

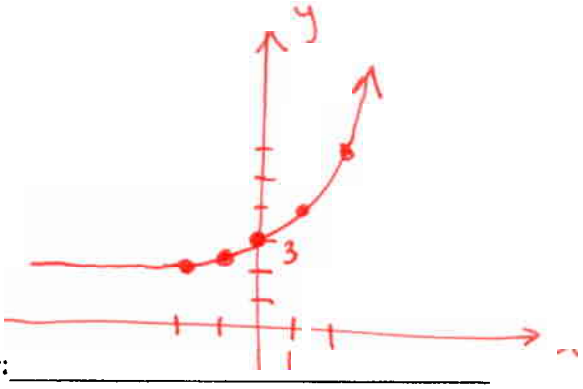
$y = 2\ 3^{2+}$

$= 2\ 3^3 = 2 \cdot 27 =$

Answer: 54

5. Make a sketch of the graph of the exponential function $y = 2 + 2^x$. Be sure to mark the y-intercept.

x	2^x	$2+2^x$
0	1	3
1	2	4
2	4	6
3	8	10
1	$\frac{1}{2}$	2.5
-2	$\frac{1}{4}$	2.25



Answer: