Math 9 **Review for exam #1**

Real numbers, integer exponents, polynomials, factoring; (Ch 1, 2, 3A, 3B)

1	The additive inverse of $\|-8\|$ is _____	2	The multiplicative inverse of $5\frac{2}{3}$ is _____
3	Subtract $-5\ from\ -3$.	4	$\frac{3}{55}+\frac{7}{44}=$
5	$-3^4=$	6	$3-5[4+(2-10)]+2\cdot 3=$
7	Which of the following are not rational? $3\frac{1}{5}$, $2.343434\ldots$, $3.040040004\ldots$, $\sqrt{45}$, $\sqrt[3]{27}$, 3.44567	8	Which of the following are rational but not integer? $\sqrt{36}$, $\sqrt{6}$, $4\frac{3}{4}$, 4.5678, π, $3.454545\ldots$, $\frac{16}{8}$
9	Find the decimal representation of $\frac{7}{40}$.	10	Find the first three digits of the decimal representation of $\frac{3}{7}$.
11	$(2x^4y^{-3})^{-3}(4x^5y^{-3})=$	12	$\frac{-5x^{-3}}{2x^5}=$
13	$\left(\frac{-2x^3}{3y^5}\right)^{-3}=$	14	$5^0=$
15	Evaluate: $\frac{9^{2500}}{3^{4999}}=$	16	$\frac{4x^{-7}}{-2x^{-5}}=$
17	Evaluate the expression for $x=-3\ and\ y=2$, $\frac{5x}{2x-y}$.	18	$(4x^3y^2-3x^2y^3)-(7x^2y^3+x^3y^2)=$
19	$-3x^4y^7(2x^5y-4xy^6)=$	20	$(3x-2)(2x^2-5x+7)=$
21	$(2x+5)^2=$	22	$(3x^2-5x+7)\div(x-2)$
23	$(x^3-27)\div(x-3)=$	24	$(7x-4)(3x+5)=$
25	Factor: $12x^5y^7z-18x^3y^8$	26	Factor: $3x^2+2x-8$
27	Factor: x^3-4x	28	Factor: $3x^3y-27xy$
29	Factor: $25x^6-49y^{100}$	30	Factor: $6x^2+23x-4$
31	Factor: $10x^6-40$	32	Factor: x^3+27
33	Factor: $3x^2-17x+20$	34	Factor: $x^2-10x+21$
35	Factor: $2x^3-10x^2+12x$	36	Factor: $10x^2+23x+12$
37	Factor: $x^3+7x^2+5x+35$	38	Factor: $x^3-2x^2-3x+6=$
39	Factor: $64x^6-27$		

Answers					
1	-8	2	$\frac{3}{17}$	3	2
4	$\frac{47}{220}$	5	-81	6	29
7	$3.040040004\ldots, \sqrt{45},$	8	$4\frac{3}{4}, \quad 4.5678, 3.454545\ldots$	9	$.175$
10	$.428$	11	$\frac{y^6}{2x^7}$	12	$\frac{-5}{2x^8}$
13	$\frac{27y^{15}}{-8x^9}$	14	1	15	3
16	$-\frac{2}{x^2}$	17	$\frac{15}{8}$	18	$3x^3y^2 - 10x^2y^3$
19	$-6x^9y^8 + 12x^5y^{13}$	20	$6x^3 - 19x^2 + 31x - 14$	21	$4x^2 + 20x + 25$
22	$3x + 1\ R9$	23	$x^2 + 3x + 9$	24	$21x^2 + 23x - 20$
25	$6x^3y^7(2x^2z - 3y)$	26	$(3x - 4)(x + 2)$	27	$x(x + 2)(x - 2)$
28	$3xy(x - 3)(x + 3)$	29	$(5x^3 - 7y^{50})(5x^3 + 7y^{50})$	30	$(6x - 1)(x + 4)$
31	$10(x^3 - 2)(x^3 + 2)$	32	$(x + 3)(x^2 - 3x + 9)$	33	$(x - 4)(3x - 5)$
34	$(x - 7)(x - 3)$	35	$2x(x - 3)(x - 2)$	36	$(5x + 4)(2x + 3)$
37	$(x^2 + 5)(x + 7)$	38	$(x^2 - 3)(x - 2)$	39	$(4x^2 - 3)(16x^4 + 12x^2 + 9)$