

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? $3\frac{1}{5}$, $2.343434 \dots$, $3.040040004 \dots$, $\sqrt{45}$, $\sqrt[3]{27}$, 3.44567	8	Which of the following are rational but not integer? $\sqrt{36}$, $\sqrt{6}$, $4\frac{3}{4}$, 4.5678 , π , $3.454545 \dots$, $\frac{16}{8}$
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: $64x^3 - 27$		

Answers					
1	-8	2	$\frac{3}{17}$	3	2
4	$\frac{47}{220}$	5	-81	6	29
7	3.040040004 ... , $\sqrt{45}$,	8	$4\frac{3}{4}$, 4.5678, 3.454545 ...	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	$(4x - 3)(16x^2 + 12x + 9)$