

Name (Print): _____ Spring 2017

1. (a) Simplify and write with *positive exponents only*. $\left(\frac{4c^4d^{-2}}{-5c^{-1}y^4}\right)^{-3}$

(b) Simplify: $\left(\frac{-64}{27}\right)^{-\frac{4}{3}}$

2. Simplify the following complex fractions:

(a) $\frac{\frac{2x}{3x^2-3}}{\frac{4x}{6x-6}}$

(b) $\frac{\frac{4}{y} - 1}{\frac{1}{y} - \frac{4}{y^2}}$

3. Simplify the following radical expressions:

(a) $\sqrt{72m^{11}n^8}$

(b) $-5st^2 \sqrt[4]{48r^7s^2t^{15}}$

4. (a) Combine and simplify: $\frac{9}{x^2-2x+1} - \frac{x-3}{x^2-x}$

(b) Combine and simplify: $w\sqrt{80} - 3\sqrt{125w^2}$

5. Solve for z: $\frac{z}{z+2} + \frac{7}{z-5} = \frac{14}{z^2-3z-10}$

6. (a) Multiply: $(2\sqrt{5} - 3\sqrt{x})(4\sqrt{5} + \sqrt{x})$

(b) Multiply: $(\sqrt{3w} + 4\sqrt{z})^2$

	1	2	3	4	5	6
(a)	$\frac{-125d^6y^{12}}{64c^{15}}$	$\frac{1}{x+1}$	$6m^5n^4\sqrt{2m}$	$\frac{-x^2+13x-3}{x(x-1)(x-1)}$	z = 0	$40 - 3x - 10\sqrt{5x}$
(b)	$\frac{81}{256}$	-y	$-10srt^5\sqrt[4]{3r^3s^2t^3}$	$-11w\sqrt{5}$		$3w + 16z - 8\sqrt{3wz}$