

**Worksheet – Mixed and Entire Radicals**

1. For each mixed radical:

- Convert to an entire radical.
- State restrictions on the values of the variables.

a)  $4xy^2(\sqrt{5xy})$

b)  $3x^3y^4(\sqrt{11x^3y})$

c)  $6x^7y^5(\sqrt{2x})$

d)  $2x^2y^3(\sqrt[3]{6x^2y})$

e)  $2x^{11}(\sqrt[4]{3x^2})$

f)  $3x^4y^6(\sqrt[4]{2x^3y^4})$

g)  $2x^7y^2z^3(\sqrt[5]{3x^2yz^4})$

h)  $6x^3yz^7(\sqrt{5xy^3z^9})$

2. For each radical:

- State restrictions on the values of the variables.
- Convert to a mixed radical in *simplest form*.

a)  $\sqrt{80x^3y^4}$

b)  $\sqrt{125x^6y}$

c)  $\sqrt[3]{24x^3y^7z^2}$

d)  $\sqrt[3]{54x^2y^5}$

e)  $\sqrt[4]{32x^9y^5}$

f)  $2xy\sqrt{88x^5y^4z^3}$