### N-RN Rational Exponents using Properties of Exponents

### Alignment: HSN-RN.A. Extend the properties of exponents to rational exponents.

1. Use the Product of a Power Property to simplify these expressions

(you may further simplify using the Negative Exponents Property):

a. (32a) · (ab3c)

b. (2d5g4) · (3gr) · (dr3)

c. (4ad) · (b-2c) · (2a-4b6)

2. Use the Power of a Product Property to simplify these expressions

(you may further simplify using the Negative Exponents Property):

a. (a2b3d)5

b. (3f4g5k)2 · (m0)4

c. (3r2t-2w)2 · (2-1s3t5)-3

3. Use the Product of a Power Property and the Power of a Product Property to simplify these expressions with rational exponents:

(you may further simplify using the Negative Exponents Property):

a. (a1/2bc3) · (ab1/3c)

b. (2d3fg)1/2 · (3e2f2g4)

c. (4-1rs5)1/5 · (5s3t-2/3)1/3