N.RN.A.2: Radicals and Rational Exponents 4

1   Simplify: $\sqrt{a^{\frac{1}{2}}}$

2   Simplify: $\left(\sqrt{a^6}\right)^{\frac{1}{2}}$

3   Simplify: $(16a^4b^5 - 8a^6b^3)^{\frac{1}{3}}$

4   Find the numeric value of the following expression when $x = 4$, $y = 3$, $m = 1$, $n = 2$: $\dfrac{3x^n}{ny} - 2mx^{-\frac{1}{2}}y^m + 2nx^{-m}y^2$

5   Find the value of the following expression when $x = 4$, $y = 8$, $a = 3$, $b = 5$: $(4x^{\frac{1}{2}} - a^{-1}(y^{\frac{1}{3}} + \sqrt{x} + b))^3$

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Answer Section

1 ANS:
$\sqrt[4]{a}$

REF: 099414al
2 ANS:
$a\sqrt{a}$

REF: 119411al
3 ANS:
$2ab \sqrt[3]{2ab^2 - a^3}$

REF: 069812al
4 ANS:
14

REF: 019414al
5 ANS:
125

REF: 039305al