## N.RN.B.3: Operations with Radicals 2

1 Expressed in simplest radical form, the product of $\sqrt{6} \cdot \sqrt{15}$ is
1) $\sqrt{90}$
2) $3\sqrt{10}$
3) $9\sqrt{10}$
4) $3\sqrt{15}$

2 Which value is equivalent to the product of $4\sqrt{2}$ and $2\sqrt{6}$?
1) $16\sqrt{3}$
2) $6\sqrt{12}$
3) $6\sqrt{8}$
4) $24\sqrt{2}$

3 Simplify: $\sqrt{8} \times \sqrt{12}$

4 Simplify: $\sqrt{30} \times \sqrt{40}$

5 Simplify: $8\sqrt{12} \times 3\sqrt{24}$

6 The expression $\frac{6\sqrt{20}}{3\sqrt{5}}$ is equivalent to
1) $3\sqrt{15}$
2) $2\sqrt{15}$
3) 8
4) 4

7 Rationalize: $\frac{3}{2\sqrt{6}}$

8 Simplify: $\sqrt{24} \div \sqrt{32}$

9 Simplify: $\frac{\sqrt{18}}{\sqrt{54}}$

10 Simplify: $\frac{\sqrt{45}}{\sqrt{80}}$

11 Express $\frac{\sqrt{84}}{2\sqrt{3}}$ in simplest radical form.

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## Answer Section

1 ANS: 2
$\sqrt{6} \cdot \sqrt{15} = \sqrt{90} = \sqrt{9}\sqrt{10} = 3\sqrt{10}$

REF: 060627a

2 ANS: 1
$4\sqrt{2} \cdot 2\sqrt{6} = 8\sqrt{12} = 8\sqrt{4} \cdot \sqrt{3} = 16\sqrt{3}$

REF: 061528ia

3 ANS:
$4\sqrt{6}$

REF: 119313al

4 ANS:
$20\sqrt{3}$

REF: 039505al

5 ANS:
$288\sqrt{2}$

REF: 039114al

6 ANS: 4
$\frac{6\sqrt{20}}{3\sqrt{5}} = \frac{6}{3}\frac{\sqrt{20}}{\sqrt{5}} = 2\sqrt{\frac{20}{5}} = 2\sqrt{4} = 4$

REF: 010622a

7 ANS:
$\frac{3}{2\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{3\sqrt{6}}{12}$

REF: fall2303ai

8 ANS:
$\frac{\sqrt{3}}{2}$

REF: 119313al

9 ANS:
$\frac{\sqrt{3}}{3}$

REF: 039505al

10 ANS:

$\frac{3}{4}$

REF: 099414al

11 ANS:

$\frac{\sqrt{84}}{2\sqrt{3}} = \frac{\sqrt{4}\sqrt{21}}{2\sqrt{3}} = \sqrt{\frac{21}{3}} = \sqrt{7}$

REF: 011431ia