## A2.N.6: Square Roots of Negative Numbers 2: Write square roots of negative numbers in terms of i

1 In simplest form, $\sqrt{-300}$ is equivalent to

2 The expression $\sqrt{-180x^{16}}$ is equivalent to

3 What is the sum of $\sqrt{-2}$ and $\sqrt{-18}$?

4 The sum of $\sqrt{-18}$ and $\sqrt{-72}$ is

5 The sum of $\sqrt{-27}$ and $\sqrt{-12}$ is

6 The sum of $3\sqrt{-8}$ and $4\sqrt{-50}$ is

7 The expression $3\sqrt{-18}+5\sqrt{-12}$ is equivalent to

8 Expressed in simplest form, $\sqrt{-18}-\sqrt{-8}$ is equivalent to

9 Expressed in simplest form, $\sqrt{-18}-\sqrt{-32}$ is

10 When expressed as a monomial in terms of $i$, $2\sqrt{-32}-5\sqrt{-8}$ is equivalent to

11 Expressed in simplest form, $2\sqrt{-50}-3\sqrt{-8}$ is equivalent to

12 If $2\sqrt{-2}$ is subtracted from $3\sqrt{-18}$, the difference is

13 The expression $\dfrac{\sqrt{-50}}{\sqrt{2}}$ is equivalent to

14 Expressed in simplest form, $\dfrac{\sqrt{-20}}{\sqrt{5}}$ is equivalent to

15 Expression in simplest form, $\dfrac{\sqrt{-36}}{-\sqrt{4}}$ is equivalent to

16 The expression $\dfrac{\sqrt{-36}}{-\sqrt{36}}$ is equivalent to

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## Answer Section

1 ANS:
$10i\sqrt{3}$
$\sqrt{-300} = \sqrt{100}\sqrt{-1}\sqrt{3}$

REF: 061006a2

2 ANS:
$6x^8 i\sqrt{5}$
$\sqrt{-180x^{16}} = 6x^8 i\sqrt{5}$

REF: 081524a2

3 ANS:
$4i\sqrt{2}$

REF: 060215b

4 ANS:
$9i\sqrt{2}$

REF: 068716siii

5 ANS:
$5i\sqrt{3}$

REF: 088718siii

6 ANS:
$26i\sqrt{2}$

REF: 069820siii

7 ANS:
$9i\sqrt{2} + 10i\sqrt{3}$

REF: 060117siii

8 ANS:
$i\sqrt{2}$

REF: 018521siii

9 ANS:
$-i\sqrt{2}$
$\sqrt{9}\sqrt{-1}\sqrt{2} - \sqrt{16}\sqrt{-1}\sqrt{2} = 3i\sqrt{2} - 4i\sqrt{2} = -i\sqrt{2}$

REF: 061404a2

10 ANS:
$-2i\sqrt{2}$

REF: 080507b
11 ANS:
$4i\sqrt{2}$

REF: 089018siii
12 ANS:
$7i\sqrt{2}$

REF: 069929siii
13 ANS:
$5i$

REF: 080816b
14 ANS:
$2i$

REF: 080905b
15 ANS:
$-3i$

REF: 068830siii
16 ANS:
$-i$

REF: 069616siii