A2.N.6: Square Roots of Negative Numbers 3: Write square roots of negative numbers in terms of i

1 Express the sum of $\sqrt{-25}$ and $4\sqrt{-9}$ in terms of *i*.

2 Express the sum of $\sqrt{-81}$ and $3\sqrt{-25}$ as a monomial in terms of *i*.

3 Express the sum of $\sqrt{-64}$ and $3\sqrt{-4}$ as a monomial in terms of *i*.

4 Express the sum of $2\sqrt{-49}$ and $-3\sqrt{-16}$ as a monomial in terms of *i*.

5 Express the sum of $4\sqrt{-12}$ and $3\sqrt{-27}$ in simplest radical form, in terms of *i*.

6 Express the sum of $2\sqrt{-9}$ and $7\sqrt{-64}$ in simplest form in terms of *i*.

7 Express the sum of $2\sqrt{-50}$ and $6\sqrt{-162}$ as a monomial in terms of *i*.

8 Express the sum of $\sqrt{-64} + 2\sqrt{-16}$ in terms of *i*.

9 Express in terms of *i* the sum of $\sqrt{-25} + 2\sqrt{-36}$.

10 Express $\sqrt{-8} + \sqrt{-18}$ as a monomial in terms of *i*.

11 Express $4\sqrt{-49} + 3\sqrt{-16}$ as a monomial in terms of *i*.

12 Express $\sqrt{-2} + \sqrt{-18}$ as a monomial in terms of *i*.

13 Express $\sqrt{-27} + 7\sqrt{-12}$ as a monomial in terms of *i*.

14 If $f(x) = \sqrt{3x} + \sqrt{12x}$, express $f(-3)$ as a monomial in terms of *i*.

15 Express $-3i + \frac{1}{2}\sqrt{-64}$ as a monomial in terms of *i*.

16 Express $\sqrt{-48} + 3.5 + \sqrt{25} + \sqrt{-27}$ in simplest $a + bi$ form.

17 Express the sum of $(2 - \sqrt{-4})$ and $(-3 + \sqrt{-16})$ in $a + bi$ form.

18 Express the sum of $3 + \sqrt{-49}$ and $2 + \sqrt{-121}$ in simplest $a + bi$ form.

19 Simplify and express in terms of i: $5\sqrt{-4} + \sqrt{-1} - 2\sqrt{-9}$

20 Express as a monomial in terms of i: $8\sqrt{-36} - 4\sqrt{-49}$

21 Express $3\sqrt{-16} - 2\sqrt{-9}$ in terms of i.

22 Express as a monomial in terms of i: $3\sqrt{-32} - \sqrt{-8}$

23 Express $7\sqrt{-8} - \sqrt{-50}$ as a monomial in terms of i.

24 Express $3\sqrt{-27} - 2\sqrt{-75}$ as a monomial in terms of i.

25 Express $4\sqrt{-144} - 3\sqrt{-49}$ as a monomial in terms of i.

26 In terms of i, express in simplest form: $\sqrt{-64} - 3\sqrt{-4}$

27 Express $4\sqrt{-25} - 2\sqrt{-81}$ as a monomial in terms of i.

28 Express in simplest form in terms of i: $5\sqrt{-25} - 3\sqrt{-100}$

29 Simplify: $\sqrt{-9} \times \sqrt{-16}$

30 Simplify: $\sqrt{-3} \times \sqrt{-4}$

31 Express the product of $(2 + \sqrt{-9})$ and $(3 - \sqrt{-16})$ in the form $a + bi$.

A2.N.6: Square Roots of Negative Numbers 3: Write square roots of negative numbers in terms of i

Answer Section

1 ANS:
$17i$

REF: 089303siii

2 ANS:
$24i$

REF: 089501siii

3 ANS:
$14i$

REF: 069705siii

4 ANS:
$2i$

REF: 019903siii

5 ANS:
$17i\sqrt{3}$

REF: 011025b

6 ANS:
$62i$

REF: 089903siii

7 ANS:
$64i\sqrt{2}$

REF: 010113siii

8 ANS:
$16i$

REF: 068402siii

9 ANS:
$17i$

REF: 018416siii

10 ANS:
$5i\sqrt{2}$

REF: 069003siii

11 ANS:
$40i$

REF: 069502siii

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

REF: 060013siii
13 ANS:
$17i\sqrt{3}$

REF: 080207siii
14 ANS:
$9i$

REF: 089701siii
15 ANS:
i

REF: 010307siii
16 ANS:
$8.5 + 7i\sqrt{3}$

REF: 080422b
17 ANS:
$-1 + 2i$

REF: 019009siii
18 ANS:
$5 + 18i$

REF: 010002siii
19 ANS:
$5i$

REF: 088606siii
20 ANS:
$20i$

REF: 010402siii
21 ANS:
$6i$

REF: 018903siii
22 ANS:
$10i\sqrt{2}$

REF: 068907siii
23 ANS:
$9i\sqrt{2}$

REF: 088904siii

24 ANS:
$-i\sqrt{3}$

REF: 019403siii
25 ANS:
$27i$

REF: 069404siii
26 ANS:
$2i$

REF: 019702siii
27 ANS:
$2i$

REF: 080006siii
28 ANS:
$-5i$

REF: 060203siii
29 ANS:
-12

REF: 039413al
30 ANS:
$-2\sqrt{3}$

REF: 099511al
31 ANS:
$18 + i$

REF: 068102siii