

Assessment

Mathematics: Lesson 11



Question 1

Simplify using real numbers and i .

$$\sqrt{-9}$$

A. ± 3

B. $-i\sqrt{3}$

C. $-3i$

D. $3i$

Question 2

Simplify using real numbers and i .

$$\sqrt{-49}$$

A. $-7i$

B. $7i$

C. ± 7

D. $\sqrt{7}$

Question 3

Simplify using real numbers and i .

$$2\sqrt{-72}$$

A. $2\sqrt{2}$

B. $-12\sqrt{2}$

C. $12i\sqrt{2}$

D. $6i\sqrt{8}$

Question 4

Simplify and write in the standard form of a complex number

$$\frac{-6 - 22i}{2}$$

A. $3 - i\sqrt{22}$

B. $-3 - i\sqrt{11}$

C. $-14i$

D. $-3 - 11i$

Question 5

Simplify and write in the standard form of a complex number

$$12 + \sqrt{-289}$$

A. $12 + 289i$

B. $12 + 17i$

C. $12 - 17i$

D. $12 - 289i$

Question 6

Simplify and write in the standard form of a complex number

$$\sqrt{-361} - \sqrt{81}$$

A. $9 + 19i$

B. $10i$

C. $-10i$

D. $-9 + 19i$

Question 7

Simplify and write in the standard form of a complex number

$$i^{16}$$

A. 1

B. $-i$

C. -1

D. i

Question 8

Simplify and write in the standard form of a complex number

$$i^{21}$$

- A. 1
- B. $-i$
- C. -1
- D. i

Question 9

Simplify and write in the standard form of a complex number

$$i^{42}$$

A. 1

B. $-i$

C. -1

D. i

Question 10

Simplify and write in the standard form of a complex number

$$\frac{2}{5-3i}$$

A. $\frac{5}{8} - \frac{3}{8}i$

B. $\frac{5}{8} + \frac{3}{8}i$

C. $\frac{5}{17} + \frac{3}{17}i$

D. $\frac{5}{17} - \frac{3}{17}i$