

A2ComplexNumbersTestReview**Short Answer**

1. What expression is equivalent to $(3 - 2i)^2$?

Simplify the expression.

2. $(1 + 2i)(-2 + 3i)$

3. $(-3 - 6i) - (2 + 5i)$

4. $(4 + 3i)(4 - 3i)$

5. $(-4i)(2i)$

6. $(-2 + 2i) - (1 - 5i)$

7. $(-5i)(i)$

8. $(2 - 3i)(5 + 3i)(2 + 3i)$

9. $(-3 - 4i)(1 - 2i)$

10. $(-6 + 4i) + (3 + 5i)$

11. $(-2 - 5i) - (4 - 3i)$

12. $(3 + 5i)(3 - 5i)$

13. Multiply $2i(4 - 6i)$. Write the result in the form $a + bi$.

14. Simplify $\sqrt{-108}$ using the imaginary number i .

15. Find the complex conjugate of $i - 5$.

16. Simplify $\sqrt{-8}$ using the imaginary number i .

17. Simplify $\frac{2 - 4i}{2 - 5i}$.

18. Simplify $\frac{3 + 3i}{-5 - 4i}$.

19. Express $5\sqrt{-55}$ in terms of i .

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Answer Section****SHORT ANSWER**

1. $5 - 12i$
2. $-8 - i$
3. $-5 - 11i$
4. 25
5. 8
6. $-3 + 7i$
7. 5
8. $65 + 39i$
9. $-11 + 2i$
10. $-3 + 9i$
11. $-6 - 2i$
12. 34
13. $12 + 8i$
14. $6i\sqrt{3}$
15. $-5 - i$
16. $2i\sqrt{2}$
17. $\frac{14 - 5i}{17}$
18. $\frac{-5 - 31i}{29}$
19. $5i\sqrt{55}$