

# TEST for Unit 1

Simplify the expression.

1.  $\sqrt{525}$

2.  $\sqrt{567}$

3.  $\sqrt{192}$

4.  $\sqrt{\frac{49}{81}}$

5.  $\sqrt{\frac{128}{25}}$

6.  $\sqrt{\frac{53}{9}}$

Write the complex number in standard form.

7.  $\sqrt{-99}$

8.  $\sqrt{-196}$

9.  $\sqrt{-80}$

10.  $2 + \sqrt{-27}$

11.  $6 - \sqrt{-162}$

12.  $-3 + \sqrt{-44}$

Write the expression as a complex number in standard form.

13.  $6i + (-2 - 7i)$

14.  $(1 - 4i) - (1 + 3i)$

15.  $(2 + 5i) + (5 - 2i)$

16.  $(-7 - 12i) + (4 + 5i)$

17.  $(1 - i) - (6 + i)$

18.  $(9 - 8i) - (4 - 13i)$

19.  $(-2 + 3i) + (2 - 3i)$

20.  $(4 - i) - (-6 + 7i)$

21.  $6i + (-7 + i) - 2$

22.  $7 - (-10 + i) + 4i$

23.  $(1 + 3i)(-2 + i)$

24.  $(-2 - 5i)(2 - 2i)$

25.  $(3 - 2i)7i$

26.  $(7 + i)5i$

27.  $(-2 + 2i)^2$

28.  $(1 - i)(2 - 6i)$

29.  $-(2 + 3i)(1 - 4i)$

30.  $(3 + 5i)^2$

31.  $4i(3 - i)(-2 + 8i)$

32.  $-3i(2 - i)(4 - 5i)$

33.  $\frac{3i}{4 - i}$

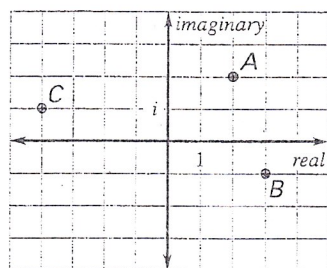
34.  $\frac{6 + 2i}{4 + 8i}$

35.  $\frac{1 + 2i}{2 - 4i} \times \frac{2 + 4i}{1 - 2i}$

36.  $\frac{-3 + i}{5 + 2i} + (2 + 2i)$

Identify the complex numbers plotted in the complex plane. Then find the absolute value of each complex number.

37.



38.

