

Complex Numbers I: Addition, Multiplication

Date _____ Period _____

Simplify.

1) $(-i) + (-5 - i)$

2) $(5i) + (2i)$

3) $(i) + (3i)$

4) $(-8i) + (3i)$

5) $(4i)(-3 - 8i) + (3i)(7 + 2i)$

6) $(-5 + 5i) + (5 - 4i)$

7) $(7 - 5i)(1 - 5i)$

8) $(7 - 2i) - (-3 - 6i)$

9) $(6 + 4i)^2$

A) $20 - 48i$

B) 121

C) $50i$

D) $20 + 48i$

10) $(-7i)(-2i)(7 - 6i)$

A) $98 - 84i$

B) $-98 - 84i$

C) $-98 + 84i$

D) $72 + 84i$

11) $(-6i)(6i)(7 - 2i)$

A) $-252 - 72i$

B) $252 - 72i$

C) $288 - 72i$

D) $-252 + 72i$

12) $(-4 + 7i)^2$

A) $-33 - 56i$

B) 16

C) $-45 - 28i$

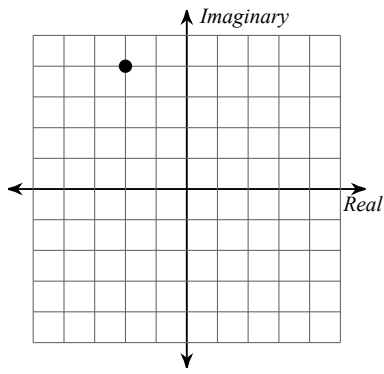
D) $-33 + 56i$

13) $(-7 - 6i)(2 + 5i)$

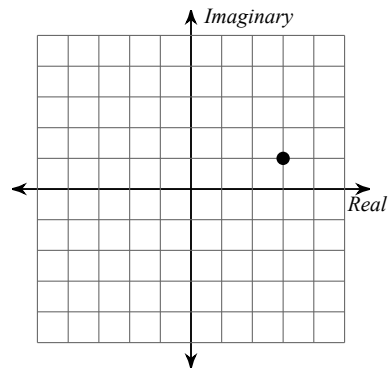
14) $(2 - i)(2 - 4i)$

Identify each complex number graphed.

15)

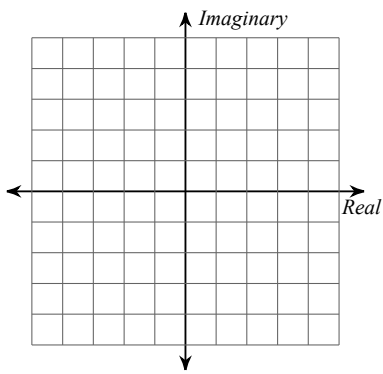


16)

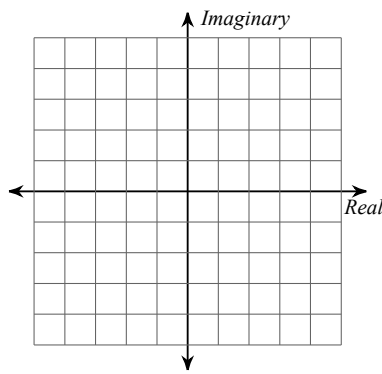


Graph each number in the complex plane.

17) $3 - 3i$



18) $-1 + i$



Find the absolute value of each complex number.

19) $|-1 + 3i|$

20) $|2 - 2i|$

21) $|-10 + 4i|$

22) $|6 + 6i|$

Complex Numbers I: Addition, Multiplication

Date _____ Period _____

Simplify.

1) $(-i) + (-5 - i)$

$-5 - 2i$

2) $(5i) + (2i)$

$7i$

3) $(i) + (3i)$

$4i$

4) $(-8i) + (3i)$

$-5i$

5) $(4i)(-3 - 8i) + (3i)(7 + 2i)$

$26 + 9i$

6) $(-5 + 5i) + (5 - 4i)$

i

7) $(7 - 5i)(1 - 5i)$

$-18 - 40i$

8) $(7 - 2i) - (-3 - 6i)$

$10 + 4i$

9) $(6 + 4i)^2$

A) $20 - 48i$

B) 121

C) $50i$

*D) $20 + 48i$

10) $(-7i)(-2i)(7 - 6i)$

A) $98 - 84i$

B) $-98 - 84i$

*C) $-98 + 84i$

D) $72 + 84i$

11) $(-6i)(6i)(7 - 2i)$

A) $-252 - 72i$

*B) $252 - 72i$

C) $288 - 72i$

D) $-252 + 72i$

12) $(-4 + 7i)^2$

*A) $-33 - 56i$

B) 16

C) $-45 - 28i$

D) $-33 + 56i$

13) $(-7 - 6i)(2 + 5i)$

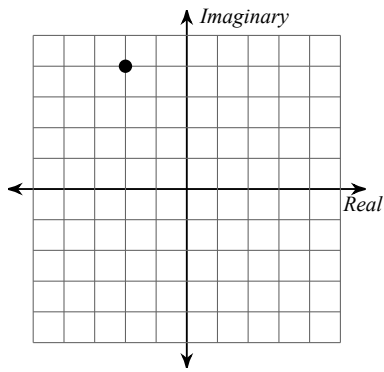
$16 - 47i$

14) $(2 - i)(2 - 4i)$

$-10i$

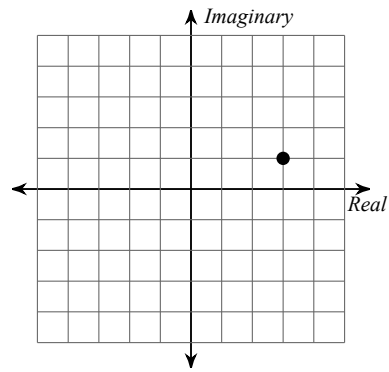
Identify each complex number graphed.

15)



$-2 + 4i$

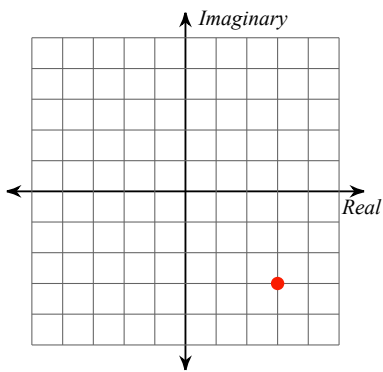
16)



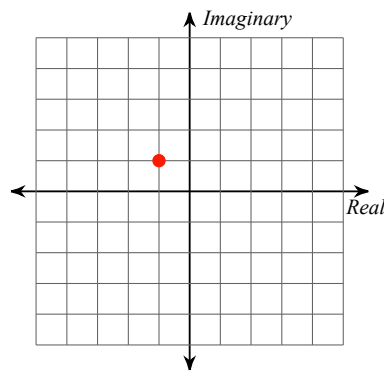
$3 + i$

Graph each number in the complex plane.

17) $3 - 3i$



18) $-1 + i$



Find the absolute value of each complex number.

19) $|-1 + 3i|$
 $\sqrt{10}$

20) $|2 - 2i|$
 $2\sqrt{2}$

21) $|-10 + 4i|$
 $2\sqrt{29}$

22) $|6 + 6i|$
 $6\sqrt{2}$