

Standard #5 Model Assessment Items

Computational and Procedural Skills

1. Identify the real and complex parts of each:

A. $-3 + 6i$

B. $7i$

C. 12

2. Simplify:

A. $-\sqrt{-25}$

B. $\sqrt{-24}$

3. Calculate the absolute value of the following

A. $1 + 2i$

B. $3i$

D. $-4 - 5i$

C. $-2 + 3i$

E. $3 - 5i$

4. Write the conjugate of each complex number:

A. 6

C. $2 - 5i$

E. $4 + 8i$

B. $4i$

D. $-6 - 3i$

F. $-5 + 9i$

Conceptual Understanding

1. Determine the conjugate of each term. Graph each number and its conjugate in the complex plane. Explain how they are the same and how they are different.

A. 2

D. $-4i$

G. $4 - 6i$

B. -3

E. $3 + 6i$

H. $-5 - i$

C. $2i$

F. $-2 + 3i$

2. Sketch a diagram that shows the absolute value of the following:

A. $1 + 2i$

D. $-4 - 5i$

B. $3i$

E. $3 - 5i$

C. $-2 + 3i$

3. From the standard form of a complex number, $a + bi$, explain what a and b represent.