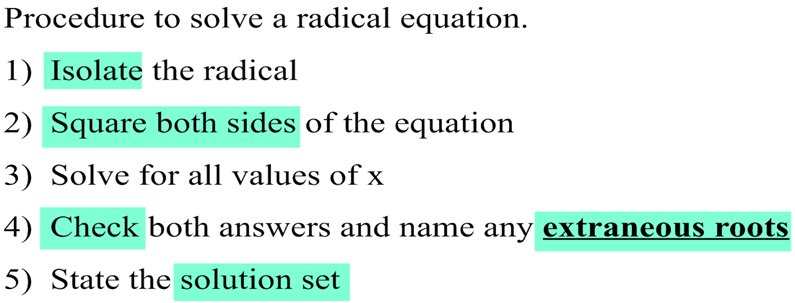
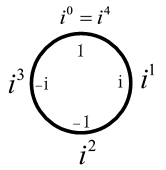
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Unit 1 Review – Polynomials & Complex Numbers**

**Helpful Information:**

**iClock**

**Level I Practice:**

1. The solution set for the equation  is

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

1. Express  in  form.
2. Simplify each of the expressions completely:
   1. b.

**Level II Practice:**

1. Given *i* is the imaginary unit,  in simplest form is

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |
|  |  |

1. The power *P*, in watts, that a circular solar cell produces and the radius of the cell *r* in centimeters are related by the square root equation . About how much power is produced by a cell with a radius of 12 cm?
2. Twyla and Ben are simplifying . Is either of them correct? Explain your reasoning.

|  |  |
| --- | --- |
| **TWYLA** | **BEN** |
|  |  |

**Level III Practice:**

1. The speed of a tidal wave, *s*, in hundreds of miles per hour, can be modeled by the equation , where *t* represents the time from its origin in hours. Algebraically determine the time when . How much faster was the tidal wave traveling after 1 hour than 3 hours, to the *nearest mile per hour*? Justify your answer.
2. Simplify completely:
3. The expression  is equivalent to

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |