## Algebra 2

## 0-02 Use Problem Solving Strategies and Models

## Common formulas

| Distance/Rate | $\boldsymbol{d}=\boldsymbol{r} \boldsymbol{t}$ | Perimeter of a Rectangle | $P=2 \boldsymbol{e}+2 \boldsymbol{w}$ |
| :---: | :---: | :---: | :---: |
| Temperature | $F=\frac{9}{5} C+32$ | Area of a Trapezoid | $A=\frac{1}{2}\left(b_{1}+b_{2}\right) h$ |
| Area of a Triangle | $A=\frac{1}{2} b h$ | Area of a Circle | $A=\pi r^{2}$ |
| Area of a Rectangle | $\boldsymbol{A}=\boldsymbol{\ell} \boldsymbol{w}$ | Circumference of a Circle | $C=2 \pi r$ |

- Easiest to start by writing an equation in $\qquad$ This is called a $\qquad$ .


## Ways to find a verbal model

- Use a $\qquad$
- Look for a $\qquad$
- Draw a

An arctic tern flies an average speed of 16.7 miles per hour. How long will it take to fly from its winter grounds in Antarctica to its breeding grounds in Greenland, a distance of 12000 miles?


The table shows the height $h$ of a paramotorist after $t$ minutes. Find the height of the paramotorist after 8 minutes.

| Time (min), $\boldsymbol{t}$ | 0 | 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Height (ft), $\boldsymbol{h}$ | 2400 | 2190 | 1980 | 1770 | 1560 |



A bear walks 10 miles towards the west. Then it turns around and walks back east for 2 miles to try to catch a fish. After lunch it walks 5 more miles west until it finds a place to sleep. How far is the bear's sleeping location from its starting position?


