**Homework Practice**

***Dilations***

**Find the coordinates of the vertices of each figure after a dilation with the given scale factor *k*. Then graph the original image and the dilation.**

 **1.** *S*(–2, 1), *U*(0, 1), *N*(–1, –1); *k* = 4 **2.** *M*(–3, 1), *A*(1, 3), *T*(2, –2), *H*(–4, –2); *k* $=\frac{1}{2}$





 **3.** *F*(–2, 1), *U*(–1, 2), *N*(3, 1); *k* = 2 **4.** *P*(–4, 2), *L*(2, 4), *A*(2, –4), *Y*(–4, –2); *k* $=\frac{1}{4}$





 **5. MAPS** Rachel and her cousin, Lena, live in different cities that are about 100 miles apart. On a map, the two cities measure 5 inches apart. What is the scale factor used for the map?

 **6. GEOMETRY** A square has vertices *J*(–1, 4), *U*(5, 4), *M*(5, –2), *P*(–1, –2). After a dilation, square *JUMP* has vertices *J*(–0.5, 2), *U*(2.5, 2), *M*(2.5, –1), *P*(–0.5, –1). What is the scale factor of the dilation?

 **7. LANDSCAPING** A landscape designer has a drawing of a flower bed that measures 6 inches by 9 inches. The owner wants the actual flower bed to be 5 feet by 7.5 feet. What is the scale factor the designer must use to install the new flower bed?