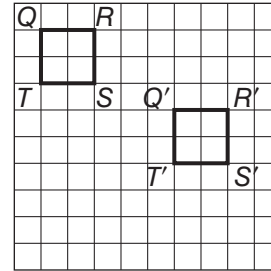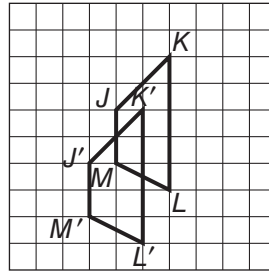# Lesson 1 Skills Practice
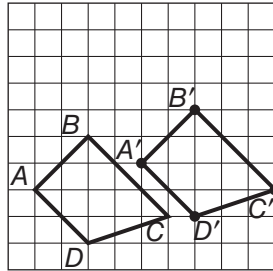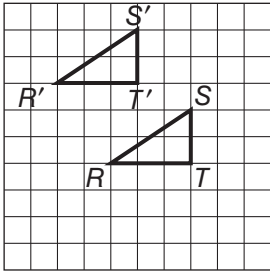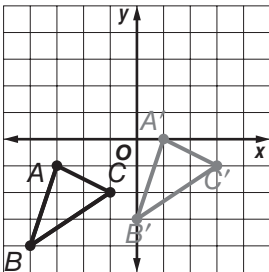
Translations

Graph the image of the figure after the indicated translation.

1. 2 units left and 3 units up

2. 4 units right and 1 unit up

3. 1 unit left and 2 units down
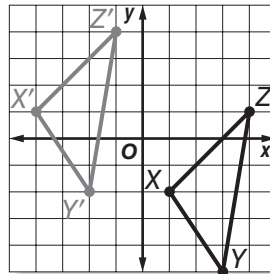
4. 5 units right and 3 units down

Graph the figure with the given vertices. Then graph the image of the figure after the indicated translation and write the coordinates of its vertices.

5. triangle *ABC* with vertices $A(-3, -1)$, $B(-4, -4)$, and $C(-1, -2)$ translated 4 units right and 1 unit up
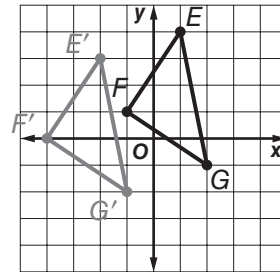
A′(1, 0), B′(0, −3), and C′(3, −1)

6. triangle *XYZ* with vertices $X(1, -2)$, $Y(3, -5)$, and $Z(4, 1)$ translated 5 units left and 3 units up
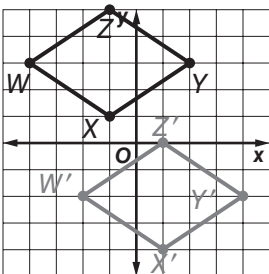
X′(−4, 1), Y′(−2, −2), and Z′(−1, 4)

7. triangle *EFG* with vertices $E(1, 4)$, $F(-1, 1)$, and $G(2, -1)$ translated 3 units left and 1 unit down
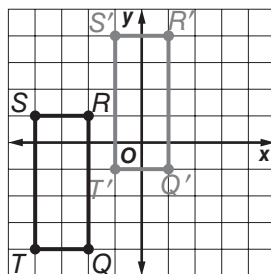
E′(−2, 3), F′(−4, 0), and G′(−1, −2)

8. rhombus *WXYZ* with vertices $W(-4, 3)$, $X(-1, 1)$, $Y(2, 3)$, and $Z(-1, 5)$ translated 2 units right and 5 units down
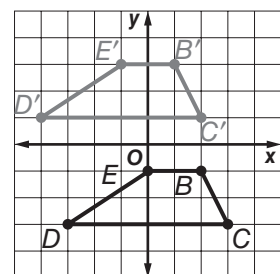
W′(−2, −2), X′(1, −4), Y′(4, −2), Z′(1, 0)

9. rectangle *QRST* with vertices $Q(-2, -4)$, $R(-2, 1)$, $S(-4, 1)$, and $T(-4, -4)$ translated 3 units right and 3 units up

Q′(1, −1), R′(1, 4), S′(−1, 4) T′(−1, −1)

10. trapezoid *BCDE* with vertices $B(2, -1)$, $C(3, -3)$, $D(-3, -3)$, and $E(0, -1)$ translated 1 unit left and 4 units up

B′(1, 3), C′(2, 1), D′(−4, 1), E′(−1, 3)