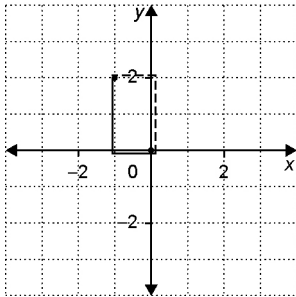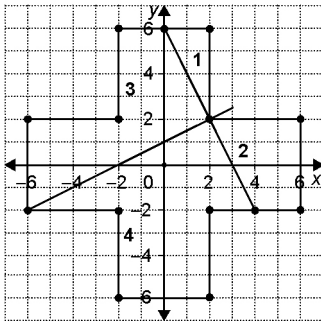# Chapter 1 Problems of the Week Answers
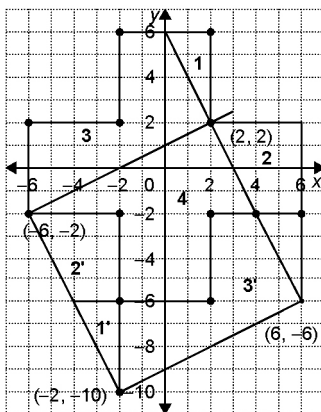
1. a) 8 (2, 1), (2, −1), (1, −2), (1, 2),
(−1, 2), (−1, −2), (−2, −1), (−2, 1)
  b) 1 move. Example:

2. a) Look for an accurately plotted and
labelled coordinate grid. Example:

  b) Answers will vary. Example: Translate
part 3 to the right 4 units and down
8 units. Translate part 2 to the left
8 units and down 4 units. Translate
part 1 to the left 4 units and down 12
units. The square lies at (−6, −2),(2, 2),
(6, −6) and (−2, −10).

3. Tammy at (1, 20)

4. There are many possible answers.
Example:
  • For the first part of the rectangle, translate
ΔKLM 2 units right and 12 units up.
  • For the second part, rotate ΔKLM 180°
about point (6, 11) or reflect ΔKLM in line
of reflection $y = 11$.
  • For the third part, reflect ΔXYZ over the
y-axis to (9, 9), (7, 6), and (9, 3), and
then translate ΔXYZ 1 unit left and
5 units up.
  • For the fourth part, rotate ΔXYZ 180°
about point (6, 11) or reflect ΔXYZ in line
of reflection $x = 6$.

5. a) Answers will vary. Example: Move 1:
A red marker from (0, 1) to (0, 0); Move
2: A blue marker from (0, −1) to jump
the red marker at (0, 0) to (0, 1); Move
3: A blue marker from (0, −2) to move
to (0, −1); Move 4: A red marker from
(0, 0) to jump the blue marker at
(0, −1) to (0, −2); Move 5: A red marker
from (0, 2) to jump the blue marker at
(0, 1) to (0, 0); Move 6: A red marker
from (0, 3) to move to (0, 2); Move 7:
A blue marker from (0, 1) to jump the
red marker at (0, 2 to (0, 3); Move 8:
A blue marker from (0, −1) to jump the
red marker at (0, 0) to (0, 1); Move 9:
A blue marker from (0, −3) to jump the
red marker at (0, −2) to (0, −1); Move
10: A red marker from (0, −2) to move
to (0, −3); Move 11: A red marker from
(0, 0) to jump the blue marker at
(0, −1) to (0, −2); Move 12: A red
marker from (0, 2) to jump the blue
marker at (0, 1) to (0, 0); Move 13:
A blue marker from (0, 1) to move to
(0, 2); Move 14: A blue marker from
(0, −1) to jump the red marker at (0, 0)
to (0, 1); Move 15: A red marker from
(0, 0) to move to (0, −1)
  b) Answers will vary. Challenge students to
do this correctly in 15 moves. Can they
do it in less than 15?