Section 1.4 Extra Practice

1. Write the coordinates for each point after the given translation.

Example:
D(3, 2): 3 units horizontally right, 2 units vertically down <u>D'(6, 0)</u>

   a) C(5, 2): 5 units vertically up _____

   b) F(−2, 6): 3 units horizontally left _____

   c) M(−8, −4): 5 units horizontally right, 4 units vertically down _____

   d) S(7, −3): 1 unit horizontally left, 2 units vertically up _____

2. Describe each translation.

Example:
T(−1, 4) → T'(0, 2)
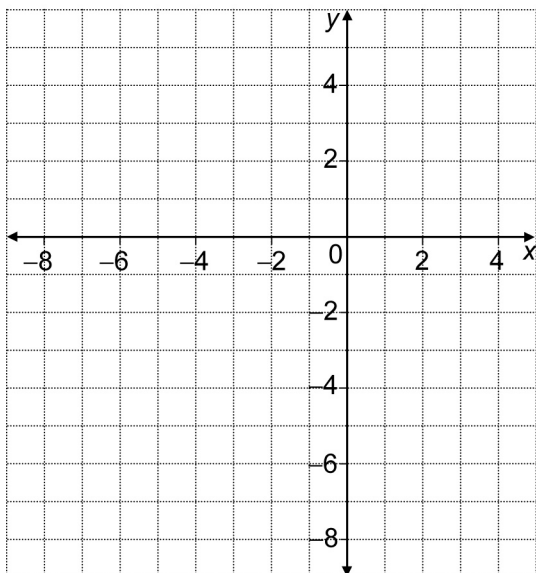<u>1 unit horizontally right, 2 units vertically down</u>

   a) B(3, 10) → B'(5, 10)

   _____

   b) C(0, 6) → C'(0, −2)

   _____

   c) N(3, 3) → N'(−1, 4)

   _____

   d) R(−4, −2) → R'(5, 10)

   _____

3. On the coordinate grid below, draw and label a triangle with vertices
R(−8, 4), S(−4, 4), and T(−6, 0).

a) Draw ΔR'S'T' after a reflection in the *x*-axis.
What are the coordinates of the vertices of ΔR'S'T'?

R'_____, S'_____, T'_____

b) Draw ΔR"S"T" after a 180º clockwise rotation about S'.
What are the coordinates of the vertices of ΔR"S"T"?

R"_____, S"_____, T"_____

c) Draw ΔR'''S'''T''' after a reflection in the *y*-axis.
What are the coordinates of the vertices of ΔR'''S'''T'''?

R'''_____, S'''_____, T'''_____

d) What single transformation would have the same result as the three
transformations in a), b), and c)?

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