Math Worksheets

Coordinates of Vertices

✎ *Calculate the new coordinates after the given transformations.*

١) Translate: ١-unit right and ٢ units down.

   A(−١, ٠), B(١, −٣), C(٢, ١)

٢) Rotation: ٢٧٠° clockwise about the origin.

   D(−١, ١), E(−٥, ٦), F(−٧, ٣), G(−٣, ١٠)

٣) Rotation: ١٨٠° counterclockwise about the origin.

   P(٣, ٠),Q(٥, ٢), R(−١, ٤), S(٢, −٧)

٤) Rotation: ٩٠° clockwise about the origin.

   J(−٢, ٥), K(−٥, ٠), L(٣, −٦)

٥) Reflection: over the y axis.

   C(−٢, −٦), D(٤, −٣), W(١, −٧), Y(٥, ١)

٦) Reflection: across the line $y = -x$.

   A(٣, −٢), B(٨, −٤), C(٦, −٦), D(١, −٥)

٧) Reflection: across the line $y = -٢$.

   K(−١, ١), L(−٤, ٢), M(٤, −١), N(٢, ٣)

٨) Dilate: Reduction by scale factor $\frac{١}{٣}$.

   A(٦, ٣), B(−١٢, ٠), C(−٩, ٦)

٩) Dilate: Enlargement by scale factor ٢.

   F(−١, ٤), G(−٣, ٠), H(٣, ٢)

Answers of Worksheets

Coordinate of Vertices

١) A′(٠, −٢), B′(٢, −٥), C′(٣, −١)

٢) D′(−١, −١), E′(−٦, −٥), F′(−٣, −٧), G′(−١٠, −٣)

٣) P′(−٣, ٠), Q′(−٥, −٢), R′(١, −٤), S′(−٢, ٧)

٤) J′(٥, ٢), K′(٠, ٥), L′(−٦, −٣)

٥) C′(٢, −٦), D′(−٤, −٣), W′(−١, −٧), Y′(−٥, ١)

٦) A′(٢, −٣), B′(٤, −٨), C′(٦, −٦), D′(٥, −١)

٧) K′(−١, −٥), L′(−٤, −٦), M′(٤, −٣) , N′(٢, −٧)

٨) A′(٢, ١), B′(−٤, ٠), C′(−٣, ٢)

٩) F′(−٢, ٨), G′(−٦, ٠), H′(٦, ٤)