Lesson 6: Dilations on the Coordinate Plane

Classwork

Exercises 1–5

1. Point is dilated from the origin by scale factor . What are the coordinates of point ?
2. Point is dilated from the origin by scale factor . What are the coordinates of point ?
3. Point is dilated from the origin by scale factor . What are the coordinates of point ?
4. Point is dilated from the origin by scale factor . What are the coordinates of point ?
5. Point is dilated from the origin by scale factor . What are the coordinates of point ?

Exercises 6–8

1. Macintosh HD:Users:shassan:Desktop:exer6.pdfThe coordinates of triangle are shown on the coordinate plane below. The triangle is dilated from the origin by scale factor . Identify the coordinates of the dilated triangle .
2. Macintosh HD:Users:shassan:Dropbox:Module 3:Images:Dil on Coord plane New L6 Images:exer7s.pdfFigure is shown on the coordinate plane below. The figure is dilated from the origin by scale factor . Identify the coordinates of the dilated figure , and then draw and label figure on the coordinate plane.
3. The triangle has coordinates ,, and . Draw and label triangle on the coordinate plane. The triangle is dilated from the origin by scale factor Identify the coordinates of the dilated triangle , and then draw and label triangle on the coordinate plane.

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Problem Set

Lesson Summary

Dilation has a multiplicative effect on the coordinates of a point in the plane. Given a point in the plane, a dilation from the origin with scale factor moves the point to

For example, if a point in the plane is dilated from the origin by a scale factor of , then the coordinates of the dilated point are

1. Triangle is shown on the coordinate plane below. The triangle is dilated from the origin by scale factor . Identify the coordinates of the dilated triangle .

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1. Triangle is shown on the coordinate plane below. The triangle is dilated from the origin by scale factor . Identify the coordinates of the dilated triangle .

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1. The triangle has coordinates ,, and . The triangle is dilated from the origin by a scale factor . Identify the coordinates of the dilated triangle .
2. Figure is shown on the coordinate plane below. The figure is dilated from the origin by scale factor . Identify the coordinates of the dilated figure , and then draw and label figure on the coordinate plane.

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1. Figure has coordinates , ,, and . The figure is dilated from the origin by scale factor Identify the coordinates of the dilated figure