EMSAT
Mathematics

Practice 5

Level: 1 Geometry - Word-Problem - Percentage

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1. A point P(-8,-9) is rotated 180° counterclockwise around the origin. What are the coordinates of the point after the rotation?

A (8, 9)   C (-9, 8)

B (-9, -8)   D (-8, 9)

2. A point Q(3, 8) is rotated 180° clockwise around the origin. What are the coordinates of the point after the rotation?

A (8, -3)   C (3, 8)

B (-3, -8)   D (8, 3)

3. A point Q(8, -12) is dilated with a scale factor of 1/4 centered at the origin. What are the new coordinates of the point after the dilation?

A (4, -6)   C (2, -3)

B (-4, 3)   D (-2, 6)

4. Line segment AB has endpoints A (6, -10) and B (4, -2) . What are the coordinates of the midpoint of $\overline{AB}$?

A (-3, -3)   C (-1, 2/3)

B (1, 1/2)   D (5, -6)

5. The area of a sector of a circle with a radius measuring 10 cm is 75π cm². What is the measure of the central angle that forms the sector?

A 90°   C 180°

B 120°   D 270°

6. If Fatima takes 35 minutes to walk 5 kilometers, how long should it take her to walk 9 kilometers maintaining the same speed?

A 70 minutes   C 63 minutes

B 56 minutes   D 45 minutes

7. The price of a jacket was $80, but it is now on sale for $60. What is the percent of decrease in the price of the jacket?

A 20%

B 25%

C 30%

D 10%

8. The number of students in a class increased from 24 to 30. What is the percent of increase in the number of students?

A 25%

B 15%

C 20%

D 22%