1. Dilations are used to get films to fit onto a movie screen as shown below.

![Diagram of film and movie screen with light beam](image)

The width of the film is 3 inches. The width of the movie screen is 52 feet. What is the scale factor of the dilation?

2. In the coordinate plane segment M’N’ is the result of a dilation of segment MN by a scale factor of \( \frac{1}{3} \). Which point is the center of dilation?

![Graph with points M, M', N, N']

A. (-6, -6)
B. (0, 0)
C. (0, 6)
D. (6, -6)

3. The circle shown in the coordinate plane below is the preimage under a dilation centered at the origin with a scale factor of 2. Which of the following points is NOT on the image of the dilation?

![Graph with circle centered at origin]

A. (-6, -6)
B. (0, 0)
C. (0, 6)
D. (6, -6)

1. Two similar triangles are graphed below.

![Graph with two similar triangles]

A. \( \triangle ABC \sim \triangle YZX \)
B. \( \triangle ABC \sim \triangle XYZ \)
C. \( \triangle BCA \sim \triangle ZYX \)
D. \( \triangle CBA \sim \triangle ZYX \)
2. Triangles $\triangle PQR$ and $\triangle TUV$ are shown below.

Based on the drawing, which statement is true?
A. $\triangle PQR \sim \triangle TUV$ by the Angle-Angle Similarity Postulate
B. $\triangle PQR \sim \triangle TUV$ by the Side-Angle-Side Similarity Theorem
C. $\triangle PQR \sim \triangle TUV$ by the Side-Side-Side Similarity Theorem
D. $\triangle PQR \sim \triangle TUV$ are not similar.

3. Which transformation results in a figure that is similar to the original figure but has a greater perimeter?
A. a dilation of $\triangle ABC$ by a scale factor of 0.25
B. a dilation of $\triangle ABC$ by a scale factor of 0.5
C. a dilation of $\triangle ABC$ by a scale factor of 1
D. a dilation of $\triangle ABC$ by a scale factor of 2

MAFS.912.G-SRT.1.3

1. Look at the triangle.

Which triangle is similar to the given triangle?
A. 

B. 

C. 

D. 

A dilation of $\triangle XYZ$ is centered at the origin and has a scale factor of 3. The image of $\triangle XYZ$ under this dilation is $\triangle MNP$. Which statement is sufficient to prove $\triangle XYZ \sim \triangle MNP$?
A. $\angle X = 3\angle M$ and $\angle Y = 3\angle N$
B. $\angle X \equiv \angle M$ and $\angle Y \equiv \angle N$
C. $XY = 3(MN)$ and $YZ = 3(NP)$
D. $XY = MN$ and $YZ = NP$
1. Triangle LMN is similar to triangle PQR.

Which of the following sets of sides lengths could be those of triangle LMN?

A. 2 in., 3 in., 4 in,
B. 6 km, 7 km, 8 km,
C. 8 ft., 15 ft., 17 ft.
D. 9 m, 12 m, 15 m.

2. Which statement describes the relationship between \( \triangle ABC \) and \( \triangle ECD \)?

A. The triangles are equilateral.
B. The triangles are congruent.
C. The triangles are isosceles.
D. The triangles are similar.

3. A triangle has vertices at \( A (-5, -4), B (-1, 3), \) and \( C (6, -2) \). If \( \triangle ABC \sim \triangle DEF \), with \( D (-12, -8) \) and \( E (-4, 6) \), what are the coordinates of point \( F \)?

A. \((-1, -6)\)
B. \((3, 9)\)
C. \((9, -3)\)
D. \((10, -4)\)

4. In the triangle below, what is the approximate value of \( x \)?

A. 4 in.
B. 4.5 in.
C. 4.9 in.
D. 5.1 in.

5. What is the value of \( x \) in the triangle below?

A. \( \frac{5\sqrt{3}}{2} \) cm
B. \( 5\sqrt{3} \) cm
C. 10 cm
D. 15 cm
Mini Assessment # 1

1. A dilation with a center at \(P(0,0)\) and a scale factor \(k\) is applied to \(MN\). Let \(M'N'\) represent the image of \(MN\) after the dilation.
Select each correct statement.
- If \(k > 0\), then \(M'N' > MN\).
- If \(k > 1\), then \(M'N' > MN\).
- If \(0 < k < 1\), then \(M'N' < MN\).
- If \(0.5 < k < 1.5\), then \(M'N' < MN\).
- If \(k = 1\), then \(M'N' = MN\).
- If \(k = 0.5\), then \(M'N' = 0.5(MN)\).

2. In the diagram, quadrilaterals \(FBAG\) and \(CDEF\) are rectangles.
![Diagram]

How long is \(DE\) rounded to the nearest tenth?
Enter your answer in the box.

3. Given the two triangles shown, find the value of \(x\).
![Diagram]

Select from the value that correctly completes the sentence.
The value of \(x\) is

4. The figure shows line segment JK and point P that is not collinear with points J and K.
![Diagram]

Suppose that line segment \(J'K'\) is the image of line segment \(JK\) after a dilation with scale factor 0.5 that is centered at point \(P\). Which statement best describes the position of line segment \(J'K'\)?
- A. Line segment \(J'K'\) is parallel to line segment \(JK\).
- B. Line segment \(J'K'\) is perpendicular to line segment \(JK\).
- C. Line segment \(J'K'\) intersects line segment \(JK\) at one point, but it is not perpendicular to line segment \(JK\).
- D. Line segment \(J'K'\) lies on the same line as line segment \(JK\).

5. Triangle \(APQ\) is the image of \(\triangle ABC\) under a dilation centered at vertex \(A\) with scale factor \(\frac{1}{2}\). Triangle \(RBT\) is the image of \(\triangle ABC\) under a dilation centered at vertex \(B\) with scale factor \(\frac{3}{4}\). Which statement about \(\triangle ABC, \triangle APQ,\) and \(\triangle RBT\) is correct?
- A. All three triangles are similar.
- B. None of the triangles are similar.
- C. Triangles APQ and RBT are not similar because they were dilated using different scale factors.
- D. Triangles APQ and RBT are not similar because they were dilated with different centers of dilation.

6. Figure \(A'B'C'D'F'\) is a dilation of figure \(ABCDF\) by a scale factor of \(\frac{1}{2}\). The dilation is centered at \((-4, -1)\).
![Diagram]
Which statement is true?

A. \[ \frac{AB}{AB} = \frac{BC}{BC} \]
B. \[ \frac{AB}{AB} = \frac{BC}{BC} \]
C. \[ \frac{AB}{AB} = \frac{BC}{BC} \]
D. \[ \frac{AB}{AB} = \frac{BC}{BC} \]