9 Advance Mathematics

Lesson – 4.7 (Absolute value function)

Name in English -

Describe the dilation in $g(x)$ as it relates to the graph of the parent function.

1. $g(x) = \frac{2}{5}|x|$
   a) Vertically compressed by $\frac{2}{5}$ units
   b) Vertically stretched by $\frac{2}{5}$ units
   c) Horizontally compressed by $\frac{2}{5}$ units
   d) Horizontally stretched by $\frac{2}{5}$ units

2. $g(x) = |0.7x|$
   a) Vertically compressed by 0.7 units
   b) Vertically stretched by 0.7 units
   c) Horizontally compressed by 0.7 units
   d) Horizontally stretched by 0.7 units

3. $g(x) = -\frac{7}{4}|x|$
   a) Vertically compressed by $\frac{7}{4}$ units
   b) Vertically stretched by $\frac{7}{4}$ units
   c) Horizontally compressed by $\frac{7}{4}$ units
   d) Horizontally stretched by $\frac{7}{4}$ units

4. $g(x) = 1.3|x|$
   a) Vertically compressed by 1.3 units
   b) Vertically stretched by 1.3 units
   c) Horizontally compressed by 1.3 units
   d) Horizontally stretched by 1.3 units

5. $g(x) = -|3x|$
   a) Vertically compressed by 3 units
   b) Vertically stretched by 3 units
   c) Horizontally compressed by 3 units
   d) Horizontally stretched by 3 units

6. $g(x) = \left|\frac{1}{6}x\right|$
   a) Vertically compressed by $\frac{1}{6}$ units
   b) Vertically stretched by $\frac{1}{6}$ units
   c) Horizontally compressed by $\frac{1}{6}$ units
   d) Horizontally stretched by $\frac{1}{6}$ units

7. $g(x) = \frac{5}{4}|x|$
   a) Vertically compressed by $\frac{5}{4}$ units
   b) Vertically stretched by $\frac{5}{4}$ units
   c) Horizontally compressed by $\frac{5}{4}$ units
   d) Horizontally stretched by $\frac{5}{4}$ units

8. $g(x) = -2|x|$
   a) Vertically compressed by 2 units
   b) Vertically stretched by 2 units
   c) Horizontally compressed by 2 units
   d) Horizontally stretched by 2 units

9. $g(x) = -\left|\frac{3}{2}x\right|$

a) Vertically compressed by $\frac{3}{2}$ units

b) Vertically stretched by $\frac{3}{2}$ units

c) Horizontally compressed by $\frac{3}{2}$ units

d) Horizontally stretched by $\frac{3}{2}$ units

10. $g(x) = \left|\frac{11}{2}x\right|$

a) Vertically compressed by $\frac{11}{2}$ units

b) Vertically stretched by $\frac{11}{2}$ units

c) Horizontally compressed by $\frac{11}{2}$ units

d) Horizontally stretched by $\frac{11}{2}$ units