Name _____ Date _____ Class _____
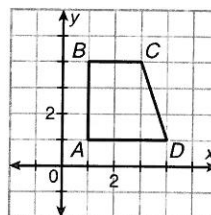
Describe the effect of each change on the area of the given figure.

1.
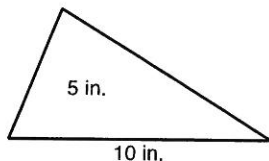
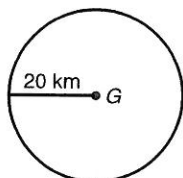The base of the triangle is tripled.

_____

2.

The height of a trapezoid with vertices $A(1,1)$, $B(1, 4)$, $C(3, 4)$, and $D(4, 1)$ is multiplied by $\frac{2}{3}$.

_____

3. The height of a parallelogram with base 7 m and height 5 m is multiplied by $\frac{1}{5}$. Describe the effect on the area.
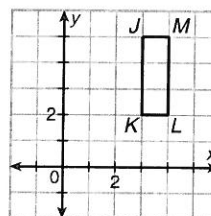
_____

Describe the effect of each change on the perimeter or circumference and the area of the given figure.

4.

The radius of $\odot G$ is multiplied by $\frac{1}{4}$.

_____

_____

5.

The length and width of a rectangle with vertices $J(3, 5)$, $K(3, 2)$, $L(4, 2)$, and $M(4, 5)$ are both multiplied by 8.

_____

_____

6. A square has a side length of 2 mm. The sides are doubled in length. Describe the effect on the square's perimeter and area.

_____

Holt Geometry

Title: Changing Dimensions – Area & Perimeter – Practice

Calculate the Effects

1. A rectangle's length and width is quadrupled. How does this change affect the area? How does this change affect the perimeter?

2. If the base of a triangle is tripled, what will happen to its area?

3. The sides of a square are doubled. What is the effect on its area?

4. The radius of a circle triples. What is the effect on its area?

Calculate the New Area:

5. The area of a rectangle is 30 ft². If the length and width increase 4 times, how much does the area change? What is the new area? What is the new perimeter?

6. The area of a circle is 25π in². If the radius is doubled, what is the new area?

7. The area of a triangle is 10 yds². If the base and height are doubled, what is the new area?

8. The area of a square is 5mm². If the side increases 3 times, what is the new area?

Compare the Areas:

9. A 5in by 7in photo is enlarged to a 10in by 14in photo. What happened to the sides to make this change? How does the area of the large photo compare to the area of the small photo?

10. Cosmo's square magazine has an area that is 4 times the area of Seventeen's square magazine. What was the effect on the sides to make this change? How do the perimeters compare?