7 TAKS PRACTICE

PRACTICE FOR TAKS OBJECTIVE 8

1. Describe the effect on the area of a triangle when each of its side lengths is tripled.

A The area stays the same.

B The area triples.

C The area is reduced by $\frac{1}{3}$.

D The area increases nine times.

2. The scale factor of two similar polygons is 2 : 5. The area of the smaller polygon is 20 square meters. What is the area of the larger polygon?

F $\frac{16}{5}$ m^2

G 50 m^2

H 100 m^2

J 125 m^2

3. A scale drawing of a room has $\frac{1}{36}$ the dimensions of the actual room. The drawing has a perimeter of 1.5 feet. What is the perimeter of the room?

A 24 ft

B 36 ft

C 42 ft

D 54 ft

4. The scale factor of similar triangles *ABC* and *DEF* is 1 : 9. How many times greater is the area of *DEF* than the area of *ABC*?

F 3

G 9

H 27

J 81

5. A polygon has a perimeter of 4 inches. How many times must the polygon be enlarged in order to have a perimeter of 400 inches?

A 10

B 16

C 100

D 396

6. A rectangular drawing has an area of 60 square inches. The dimensions of the drawing are enlarged by a factor of 150% using a photocopier. What is the area of the enlarged drawing?

F 90 in.^{2}

G 135 in.^{2}

H 180 in.^{2}

J 360 in.^{2}

MIXED TAKS PRACTICE

7. A hiker begins hiking a mountain at a height of 3075 feet above sea level. If the hiker's altitude increases at a constant rate of 3 feet per minute, which equation could be used to determine h, the hiker's height in feet above sea level after t minutes? *TAKS Obj. 4*

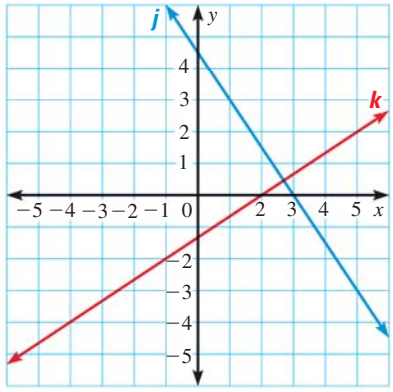
A $h = 3 + 3075t$

B $h = 3075 + 3t$

C $h = 3(t + 3075)$

D $h = (3075 + 3)t$

8. What are the slopes of the lines shown? *TAKS Obj. 3*



F j: $-\frac{3}{2}$, k: $\frac{3}{2}$

G j: $\frac{2}{3}$, k: $-\frac{3}{2}$

H j: $\frac{3}{2}$, k: $\frac{2}{3}$

J j: $-\frac{3}{2}$, k: $\frac{2}{3}$