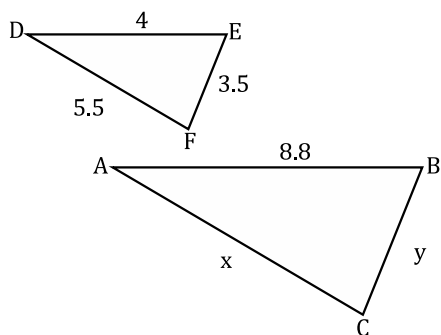
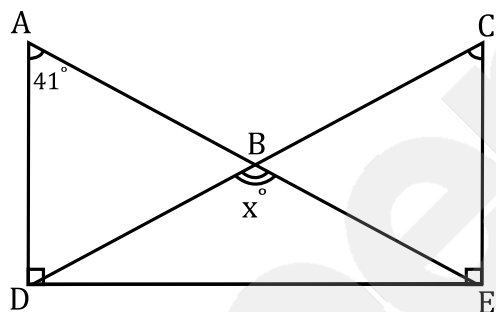


1) Triangle DEF and ABC below are similar. What is the sum of x and y ? (*calculator*)



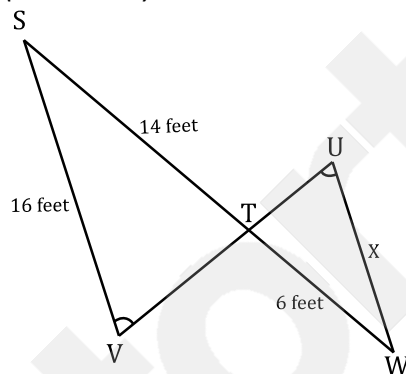
- A) 17.1
- B) 19.8
- C) 28.6
- D) 12.1

2) In the diagram below, triangle AED is congruent to triangle CDE. What is the measure of x ? (Note: triangles are not drawn to scale) (*no calculator*)



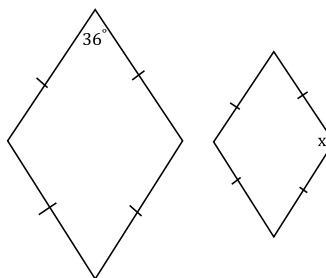
- A) 49
- B) 120
- C) 82
- D) 34

3) The diagram below has two congruent triangles that share a vertex at point T. Lines SV and UW are parallel with one another. Given the dimensions of the triangle. What is the Length of UW? (*calculator*)



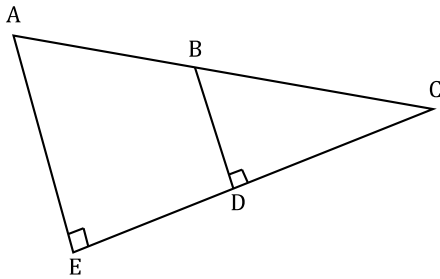
- A) 96 feet
- B) 5.8 feet
- C) 6.9 feet
- D) 7.2 feet

4) Consider the similar rhombi in the diagram below. What is the measure of x in degrees? (*calculator*)



- A) 144
- B) 288
- C) 360
- D) 72

5) Triangle ACE and triangle BCD are similar to each other with its side lengths in ratio 3:2. If Triangle BCD has an area of 40 units squared, what is the area of trapezoid ABDE? (no calculator)



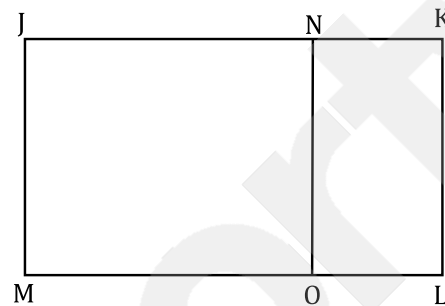
- A) 90 un^2
- B) 45 un^2
- C) 60 un^2
- D) 50 un^2

6) The parallelograms below are similar. What is the value of x in degrees? (calculator)



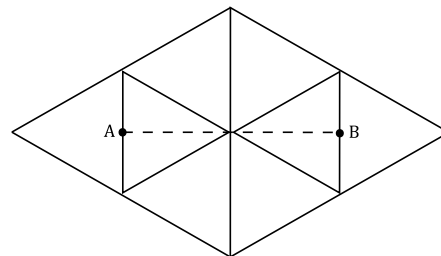
- A) 135.2
- B) 44.8
- C) 174
- D) 69.6

7) Rectangle JKLM is similar to rectangle ONKL. The length of JK is 9 inches while the length of KL is 3 inches. What is the area of rectangle ONKL? (no calculator)



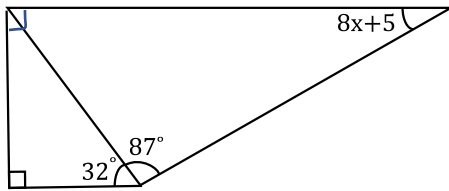
- A) 27 in^2
- B) 30 in^2
- C) 3 in^2
- D) 1 in^2

8) The diagram below shows 2 large equilateral triangles with smaller equilateral triangles on the inside whose vertices are the midpoint of the larger triangles. If the side length of the larger triangle is 10 inches, then what is the distance from point A to point B? (no calculator)



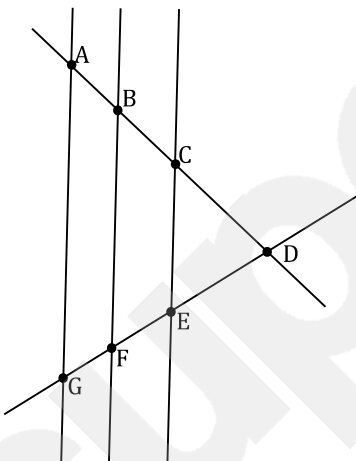
- A) $10\sqrt{3}$
- B) 2.5
- C) $5\sqrt{3}$
- D) $8\sqrt{5}$

9) Consider the diagram below. What is the value of x ? (*no calculator*)



- A) 61
- B) 7
- C) 8
- D) 124

10) 5 lines intersect one another in the figure below. Lines AG, BF, and CE are parallel with each other, with the ratio of the perimeter between ADG to CDE being 4:1. The length of AD and GD are equal as well. If the length of CD is 5 and the perimeter of CDE is 20 inches, then what is the length of AG? (*no calculator*)



- A) 25 inches
- B) 80 inches
- C) 30 inches
- D) 40 inches