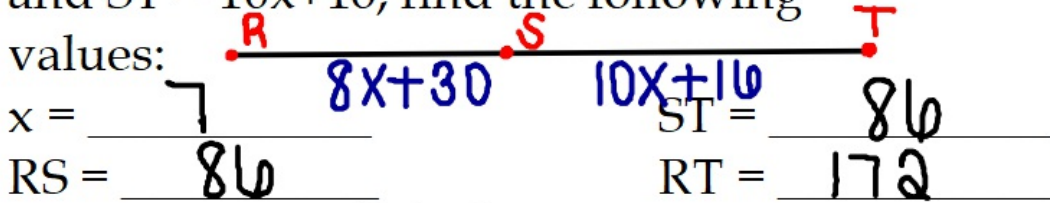


## Warm Up

March 19, 2019

1.) If S is the midpoint of line segment RT and  $RS = 8x+30$  and  $ST = 10x+16$ , find the following values:



$$\begin{array}{r} 8x+30=10x+16 \\ -8x \quad -8x \\ \hline 30=2x+16 \\ 14=2x \\ x=7 \end{array}$$

2.) The length of a square is  $2x - 1$  units and the width is  $x + 5$  units. What is the area of the square?

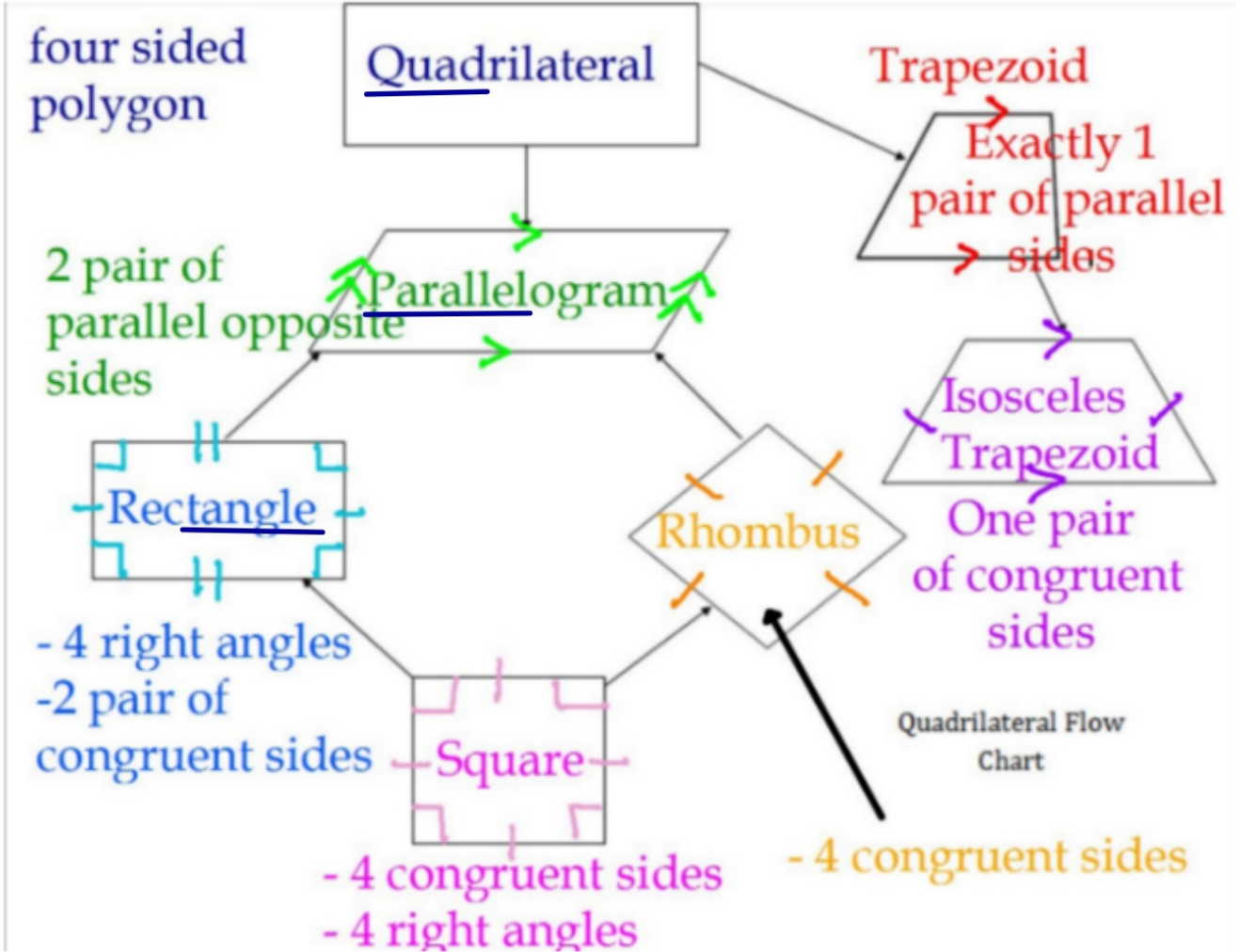
A.  $6 \text{ units}^2$

B.  $11 \text{ units}^2$

C.  $36 \text{ units}^2$

D.  $121 \text{ units}^2$

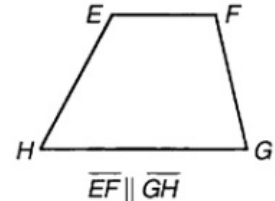
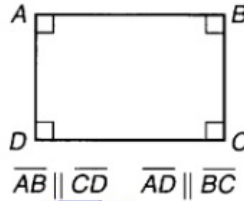
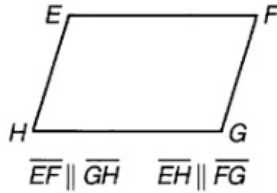
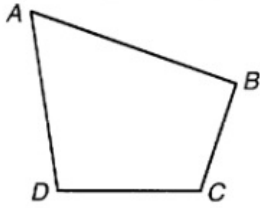
$$\begin{array}{l} 2x-1=x+5 \\ x-1=5 \\ x=6 \\ 2(6)-1=11 \\ 6+5=11 \\ \text{area} = 121 \text{ units}^2 \end{array}$$



# Why Do Airlines Think They Show the Best Movies?



Under each figure, circle the number-letter pair next to each word that correctly names the figure. Write the letter in the matching numbered box at the bottom of the page.



11 • F parallelogram

26 • H polygon

14 • D rectangle

32 • C rhombus

8 • E quadrilateral

2 • W rectangle

23 • T trapezoid

19 • U parallelogram

30 • I quadrilateral

4 • M square

34 • E polygon

6 • P square

11 • R parallelogram

17 • G rhombus

2 • O rectangle

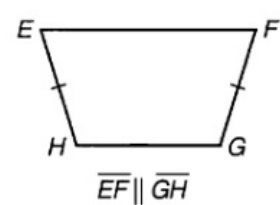
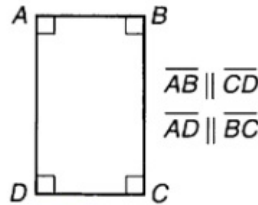
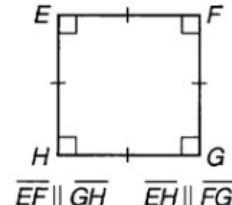
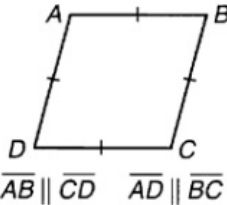
27 • U parallelogram

14 • A quadrilateral

23 • N trapezoid

1 • T isosceles

trapezoid



22 • A square

10 • K rectangle

6 • Y rhombus

30 • L trapezoid

32 • D parallelogram

27 • E square

4 • O parallelogram

31 • R trapezoid

22 • I rectangle

17 • S rhombus

25 • T quadrilateral

10 • E parallelogram

1 • N rectangle

15 • B square

5 • L trapezoid

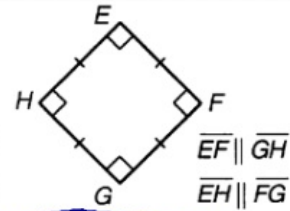
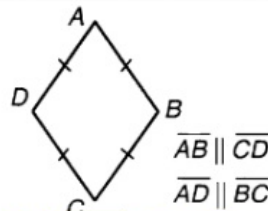
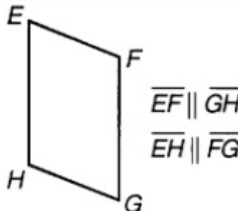
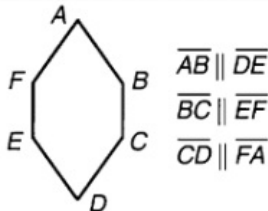
20 • F rhombus

33 • P parallelogram

31 • D trapezoid

15 • L isosceles

trapezoid



26 • X parallelogram

34 • J quadrilateral

13 • P rectangle

29 • S trapezoid

5 • D polygon

3 • R rectangle

20 • T parallelogram

16 • D rhombus

21 • H trapezoid

9 • V polygon

33 • L rhombus

7 • S square

28 • N rectangle

13 • W quadrilateral

18 • P trapezoid

3 • B rectangle

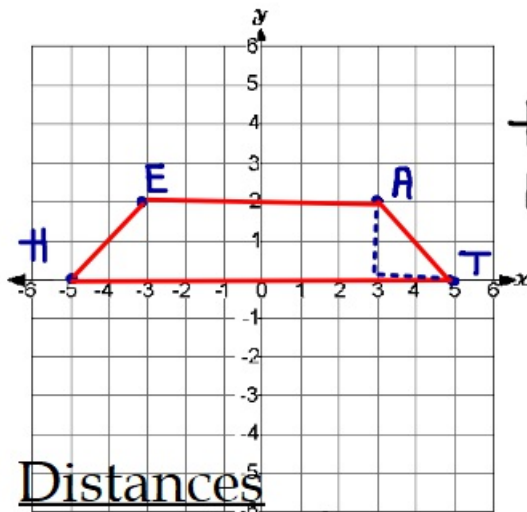
18 • O parallelogram

29 • M rhombus

24 • S trapezoid

16 • K square

H (-5,0), E(-3,2), A(3,2), T (5,0)



### Slopes

$$\begin{aligned} HE: m=1 & \quad AT: m=-1 \\ EA: m=0 & \quad HT: m=0 \end{aligned}$$

### Distances

$$(-5,0) (-3,2)$$

$$HE: \sqrt{(-3+5)^2 + (2-0)^2}$$

$$HE: \sqrt{(2)^2 + (2)^2}$$

$$HE: \sqrt{4+4}$$

$$HE: \sqrt{8}$$

$$EA: d=6$$

$$HT: d=10$$

$$AT: a^2 + b^2 = c^2$$

$$(-2)^2 + (2)^2 = c^2$$

$$4 + 4 = c^2$$

$$\sqrt{8} = c$$

$$\sqrt{8} = c$$

$$AT: d = \sqrt{8}$$

Quadrilateral HEAT is an isosceles trapezoid because sides HE and AT are congruent and sides EA and HT are parallel.