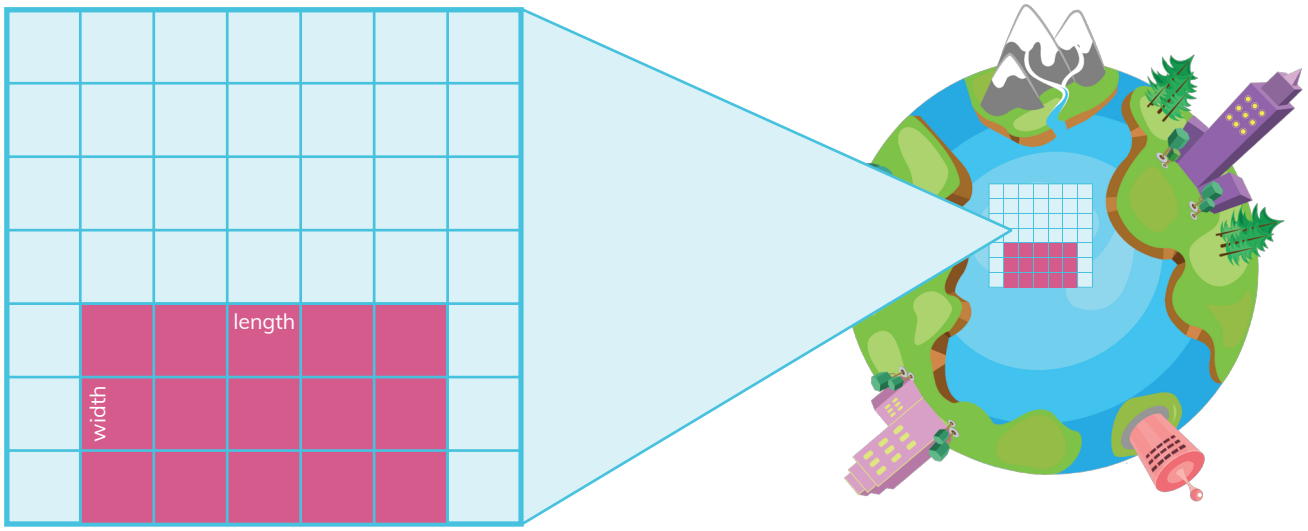
Find area of composite shapes by decomposing them into triangles, rectangles, squares, and/or trapezoids.
CCSS.MATH.CONTENT.6.G.A.1 | US_EN_06_MAT_C32_WS_m1

You, Elon, and Ellie must help out with the seating arrangement for the visitors coming from Planet Xena.

1 The image provided depicts the area available (in pink) for the visitors to gather. Write your answers in the boxes given below.



1 Number of pink-colored boxes =

2 Number of pink-colored boxes along the length of the pink rectangle =

3 Number of pink-colored boxes along the width of the pink rectangle =

4 Area of the pink rectangle =

5 Is the area of the rectangle = Number of pink-colored boxes?
Check ✓ the correct box.

☐ Yes ☐ No

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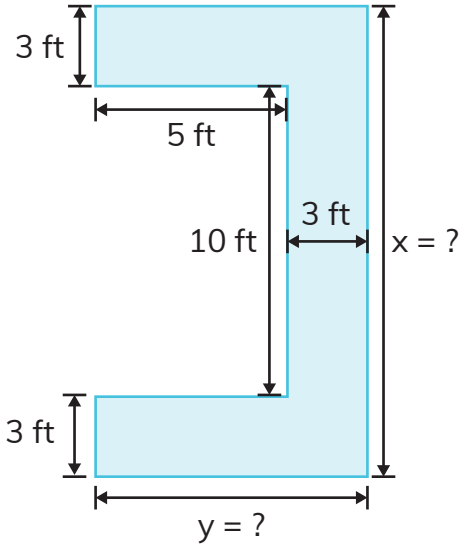
CCSS.MATH.CONTENT.6.G.A.1 | US_EN_06_MAT_C32_WS_m1

2 The seating area is in the shape of the figure shown. Find the value of x and y. Also, find the total area and write your answer in the boxes given below.

Let's find the value of x and y:

x = ☐ + 10 + ☐ | y = 5 + ☐

x = ☐☐ ft | y = ☐ ft



Let's find the total area:

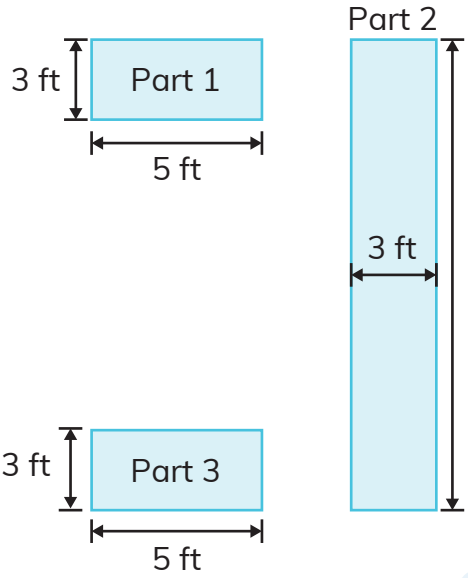
Let's break the given figure into 3 parts (as shown), and find the area of the individual parts. Then, we will add the area of all the parts to get the total area.

Area of part 1 = ☐☐ sq. ft

Area of part 2 = ☐☐ sq. ft

Area of part 3 = ☐☐ sq. ft

Total area = ☐☐ sq. ft



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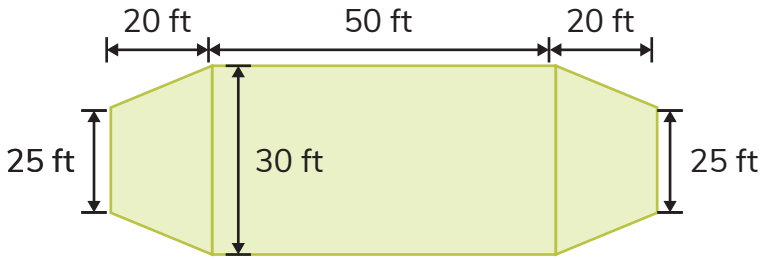
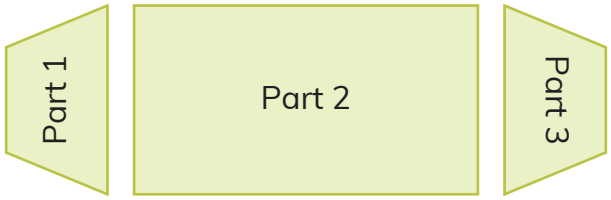
After taking care of the seating area, you have other responsibilities. You need to decorate the stage and arrange for an airbus to bring the people of Planet Xena to this event.

1 The figure given below depicts the stage floor that needs to be carpeted. Find the total area and write your answer in the boxes given below.



Let's break the given figure into 3 parts and find the total area of the floor:



Area of part 1 = ☐☐☐ sq. ft

Area of part 2 = ☐☐☐☐ sq. ft

Area of part 3 = ☐☐☐ sq. ft

Stage floor area: ☐☐☐☐ sq. ft

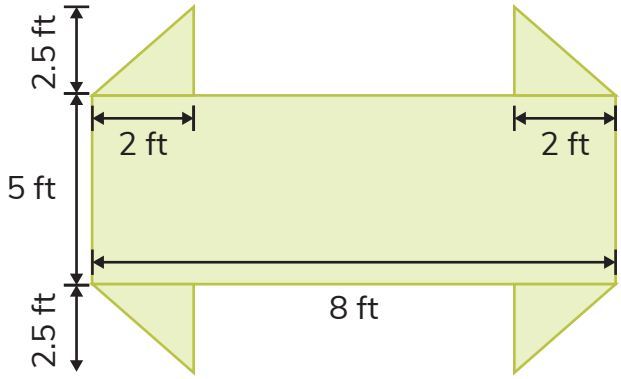
Area of carpet required to cover the stage floor is:

☐☐☐☐ sq. ft

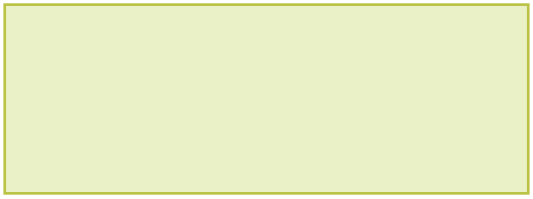
Find area of composite shapes by decomposing them into triangles, rectangles, squares, and/or trapezoids.

CCSS.MATH.CONTENT.6.G.A.1 | US_EN_06_MAT_C32_WS_m1

2 The figure given below shows the total floor area available for people to stand in the airbus. If 1 person occupies 2 sq. ft, then find the maximum number of people that can fit inside the bus. Write your answers in the boxes given below.



Let's break the given figure into 5 segments and find the total floor area of the airbus:



Total area of four triangular segments = ☐☐ sq. ft

Area of the rectangular segment = ☐☐ sq. ft

Total floor area of the airbus = ☐☐ sq. ft

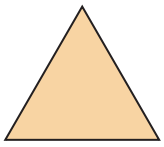
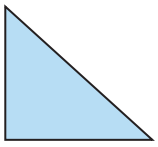
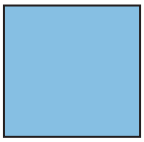
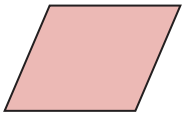
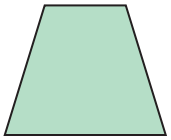
Number of people that can fit in the airbus = $\frac{\square\square}{\square}$ = ☐☐ people.

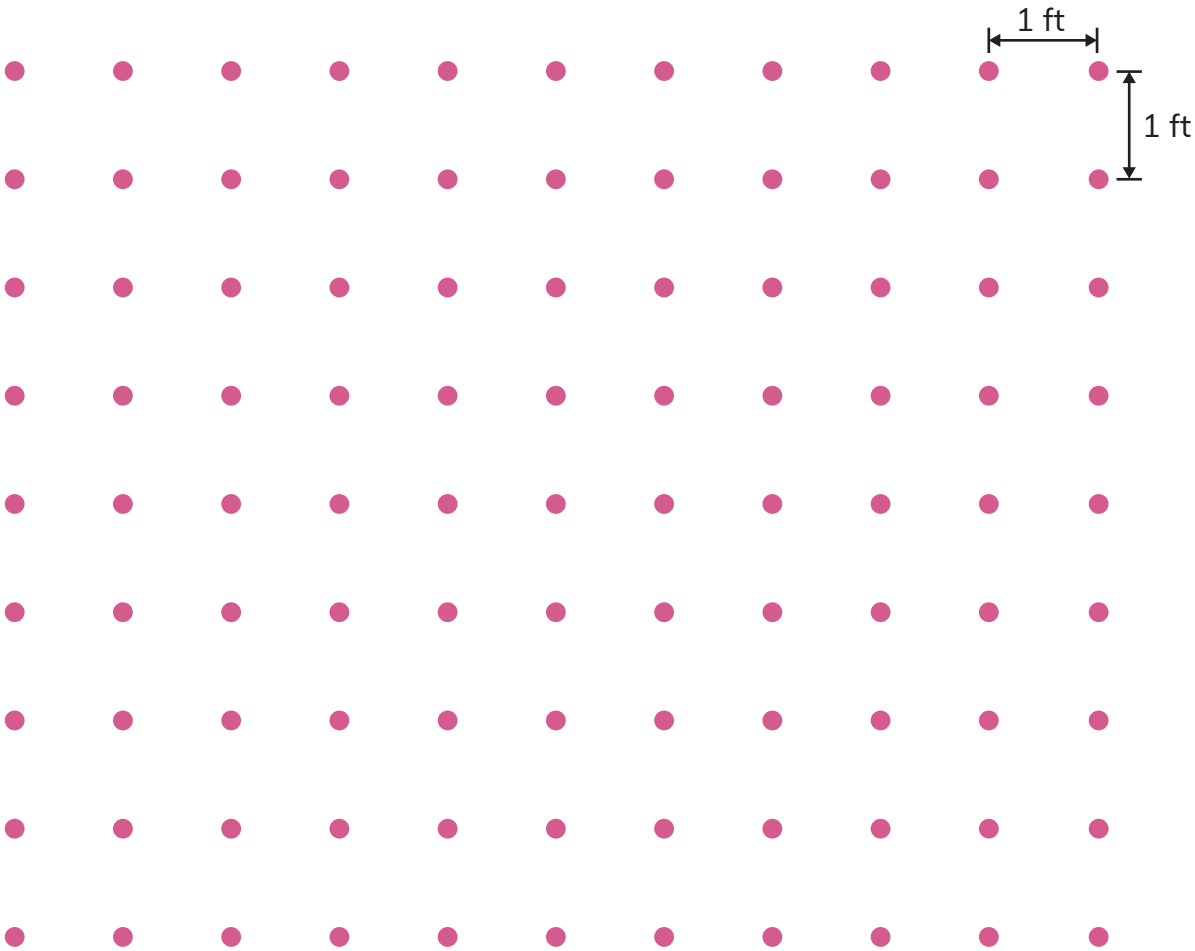
Find area of composite shapes by decomposing them into triangles, rectangles, squares, and/or trapezoids.

CCSS.MATH.CONTENT.6.G.A.1 | US_EN_06_MAT_C32_WS_m1

As the people of Planet Xena leave, you, Elon, and Ellie want to give them a parting gift.

1 To create the gift, you have to use a minimum of 4 different shapes from the table given below. Once done, calculate the area of the final shape. Write your answer in the boxes given below.

Triangles		Rectangle	Square	Parallelogram	Trapezoid
					

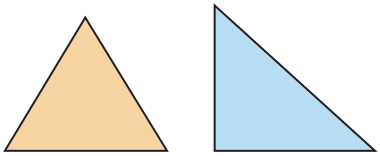
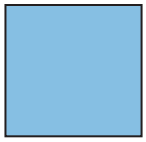
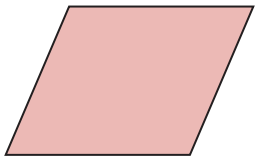
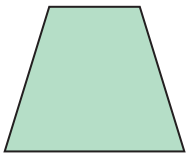


Total number of shapes (with repetition) used for the creation of the gift = ☐☐

Find area of composite shapes by decomposing them into triangles, rectangles, squares, and/or trapezoids.

CCSS.MATH.CONTENT.6.G.A.1 | US_EN_06_MAT_C32_WS_m1

Now, let's calculate the area of your parting gift:

Basic parts	Areas of the parts
	Sum of areas of all triangular parts = ☐☐ sq. ft
	Sum of areas of all rectangular parts = ☐☐ sq. ft
	Sum of areas of all square-shaped parts = ☐☐ sq. ft
	Sum of areas of all parallelogram-shaped parts = ☐☐ sq. ft
	Sum of areas of all trapezoidal parts = ☐☐ sq. ft

Total area of the gift = ☐☐ sq. ft