

What's Your Angle?

5th
Grade



Table of Contents

What's Your Angle?

Aye Aye, Area! #1 *

Aye Aye, Area! #2 *

Aye Aye, Area! #3 *

Aye Aye, Area! #4 *

Aye Aye, Area! #5 *

Angle Steering *

Treehouse Triangles #1 *

Treehouse Triangles #2 *

Treehouse Triangles #3 *

Treehouse Triangles #4 *

Treehouse Triangles #5 *

Acute Triangle: Find the Missing Base *

Obtuse Triangle: Find the Missing Base *

Certificate of Completion

Answer Sheets

** Has an Answer Sheet*

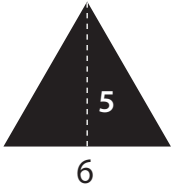
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Aye Aye, Area!

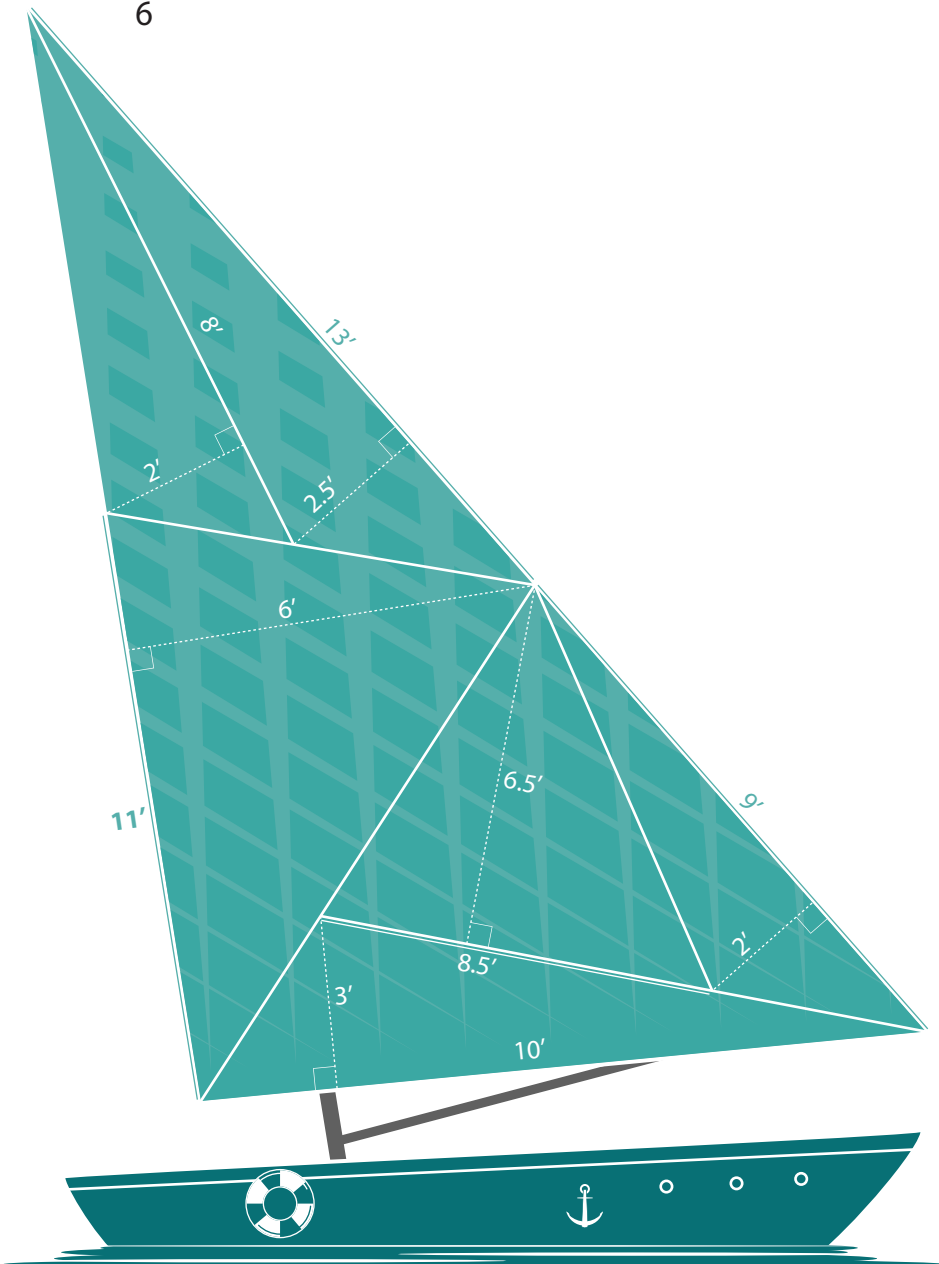


Calculate the area of the sail by finding the areas of the smaller triangles.

Remember, **triangle area = 1/2 (base x height)**



Area = $\frac{1}{2} (6 \times 5) = 15$ square feet



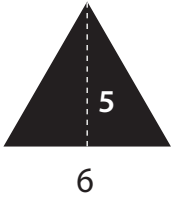
Sail area: _____



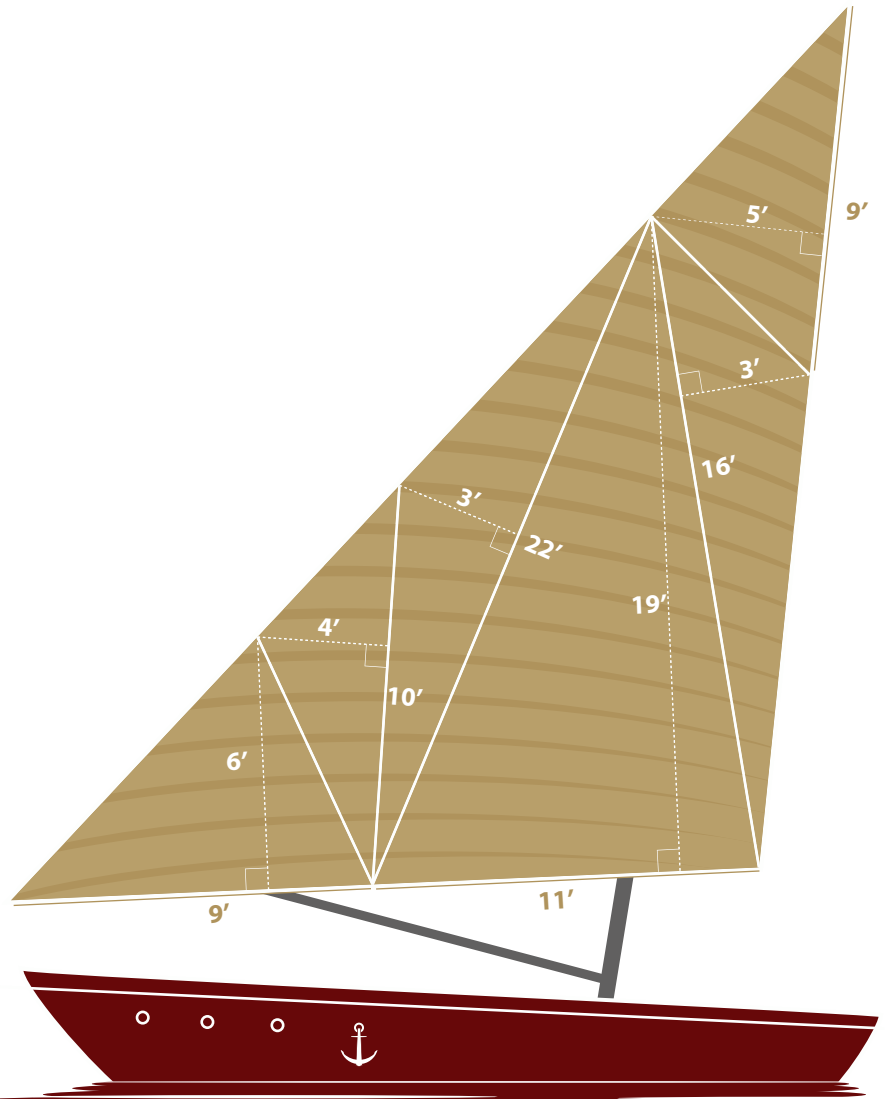
Aye Aye, Area!

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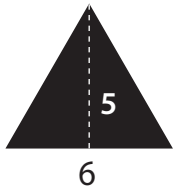
Sail area: _____



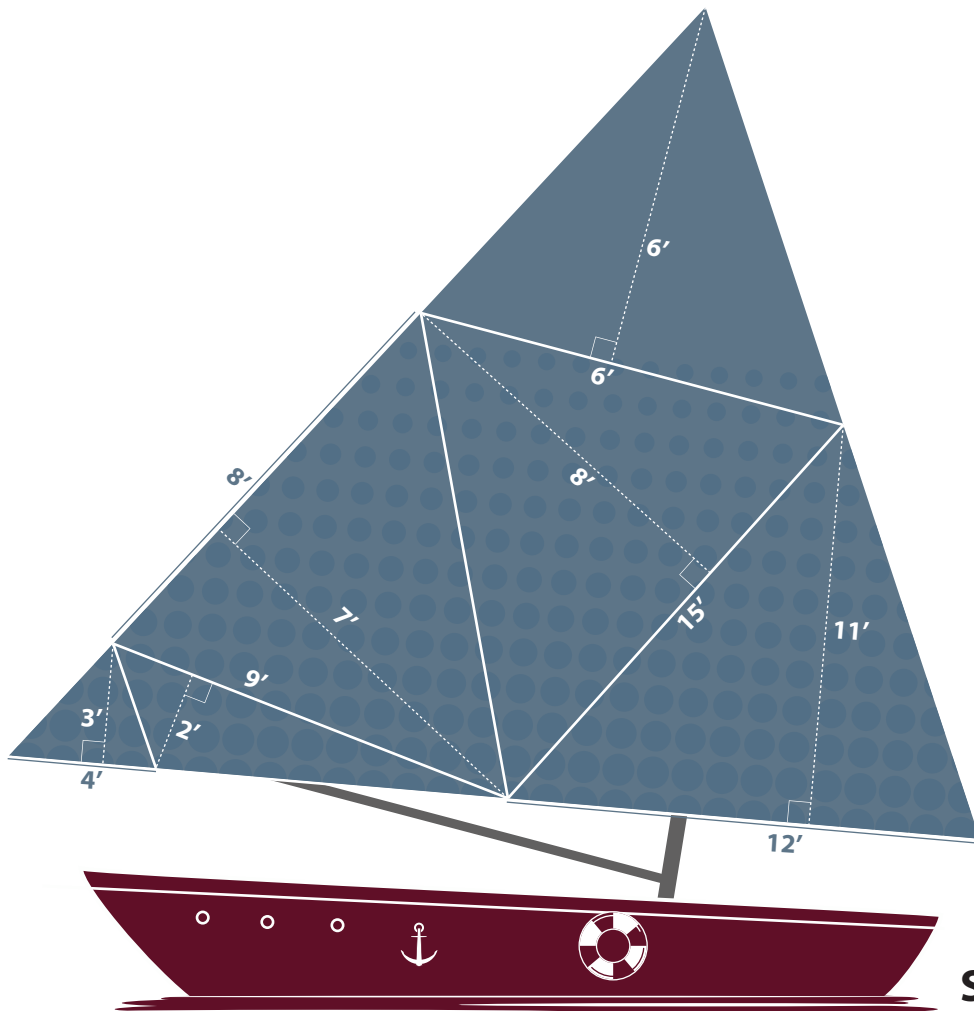
Aye Aye, Area!

Calculate the area of the sail by finding the areas of the smaller triangles.

Remember, **triangle area = $\frac{1}{2}$ (base x height)**



Area = $\frac{1}{2}$ (6x5) = 15 square feet



Sail area: _____

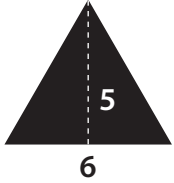


Aye Aye, Area!

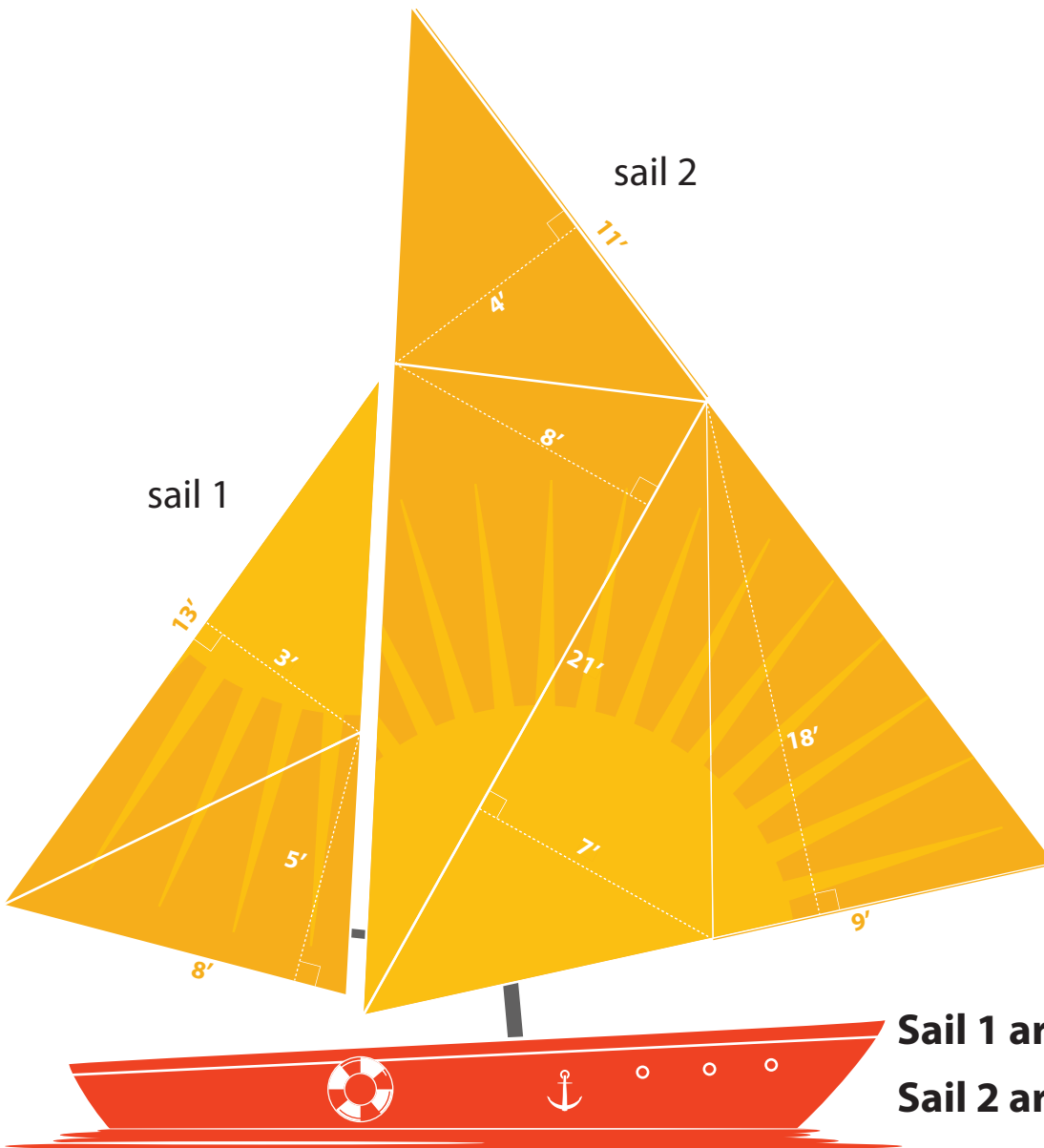


Calculate the area of the sails by finding the areas of the smaller triangles.

Remember, **triangle area = $\frac{1}{2}$ (base x height)**



Area = $\frac{1}{2}$ (6x5) = 15 square feet



Sail 1 area: _____

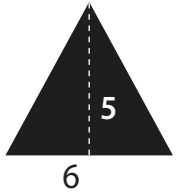
Sail 2 area: _____

Aye Aye, Area!

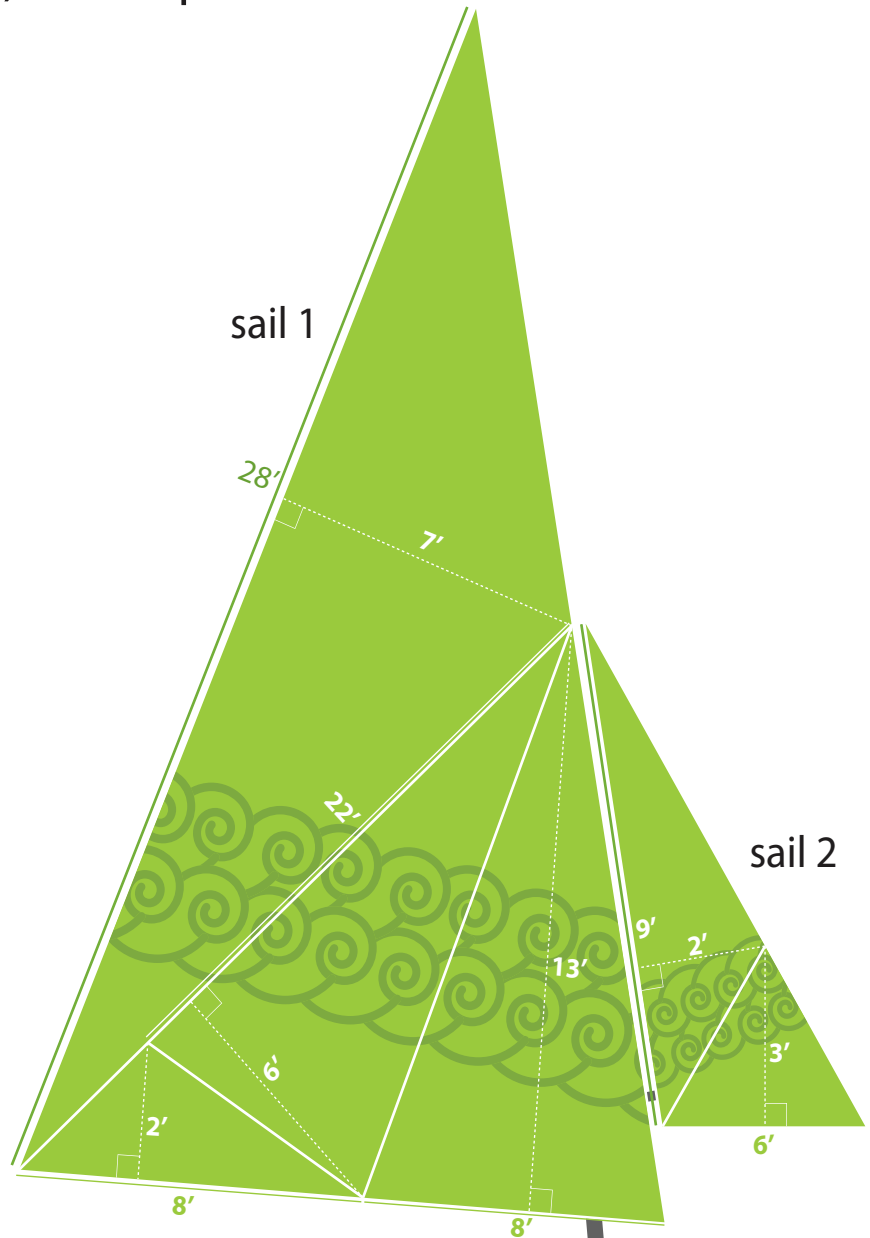


Calculate the area of the sails by finding the areas of the smaller triangles.

Remember, **triangle area = 1/2 (base x height)**



Area = $\frac{1}{2} (6 \times 5) = 15$ square feet



Sail 1 area: _____

Sail 2 area: _____





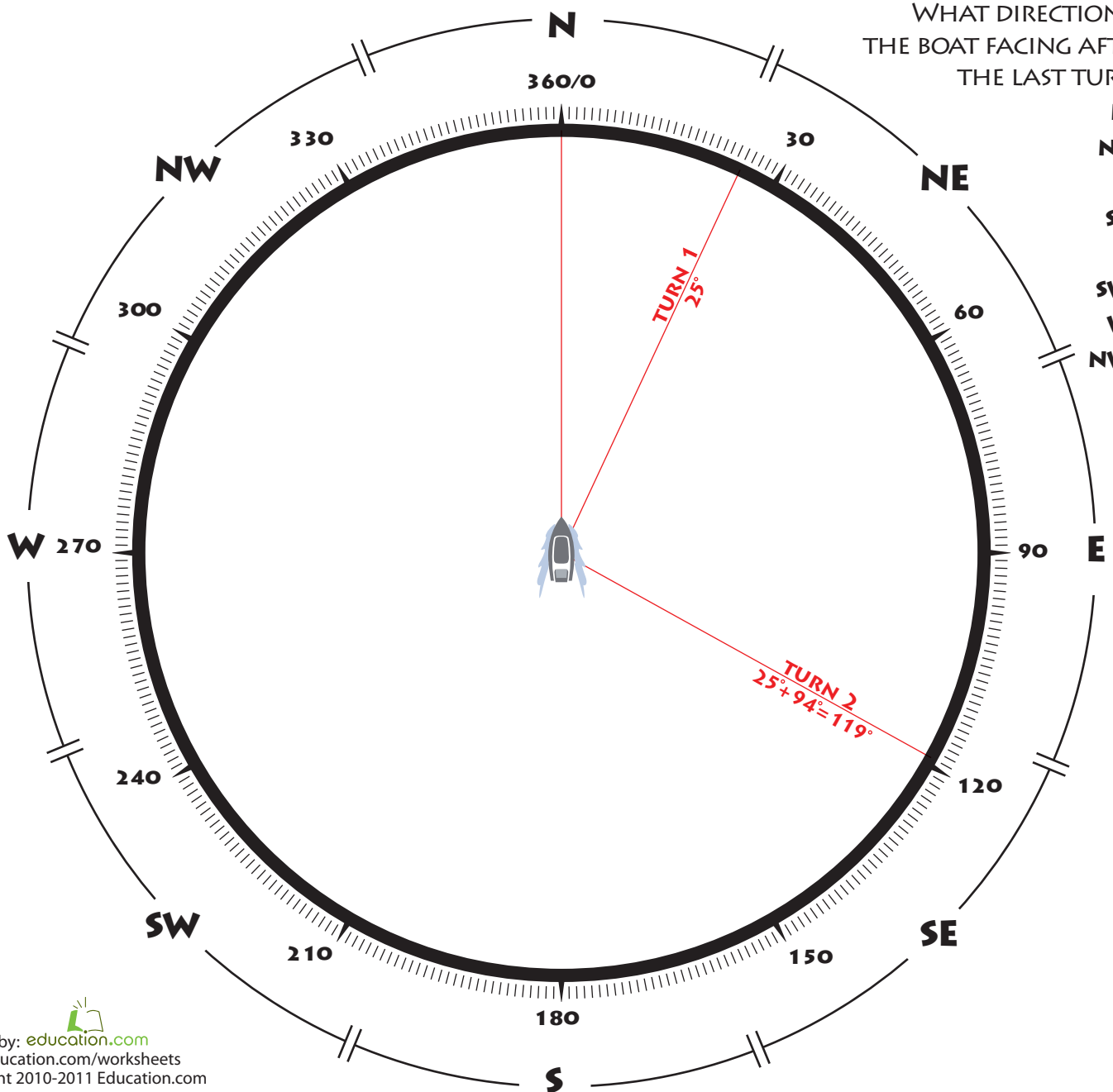
ANGLE STEERING



Steering a ship requires practice and precision. It also requires you to think about math and angles.

Turn the ship's wheel according to the angle measurements given. See the examples below. With each new turn, indicate the ship's new direction by drawing a line towards it. Turn clockwise if the angle is positive, counterclockwise if it is negative. Use a ruler to help you draw straight lines.

	1	2	3	4	5	6	7	8	9	10	11	12
Turn Degrees	+25°	+94°	-35°	-20°	+190°	-17°	+67°	+51°	-19°	-121°	-42°	+146°
New Direction	25°	119°										



WHAT DIRECTION IS THE BOAT FACING AFTER THE LAST TURN?

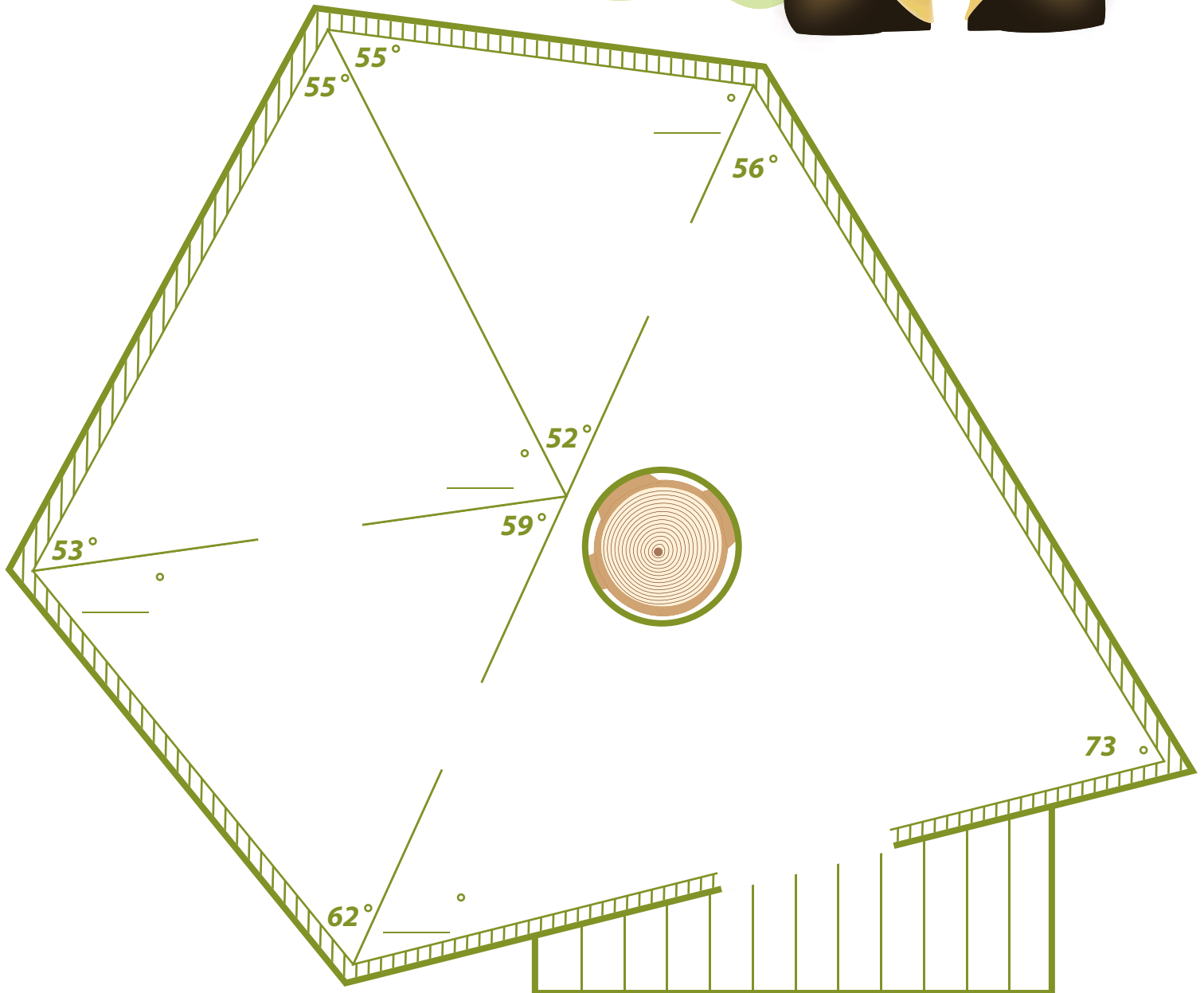
- N
- NE
- E
- SE
- S
- SW
- W
- NW



Treehouse Triangles

#1

Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!

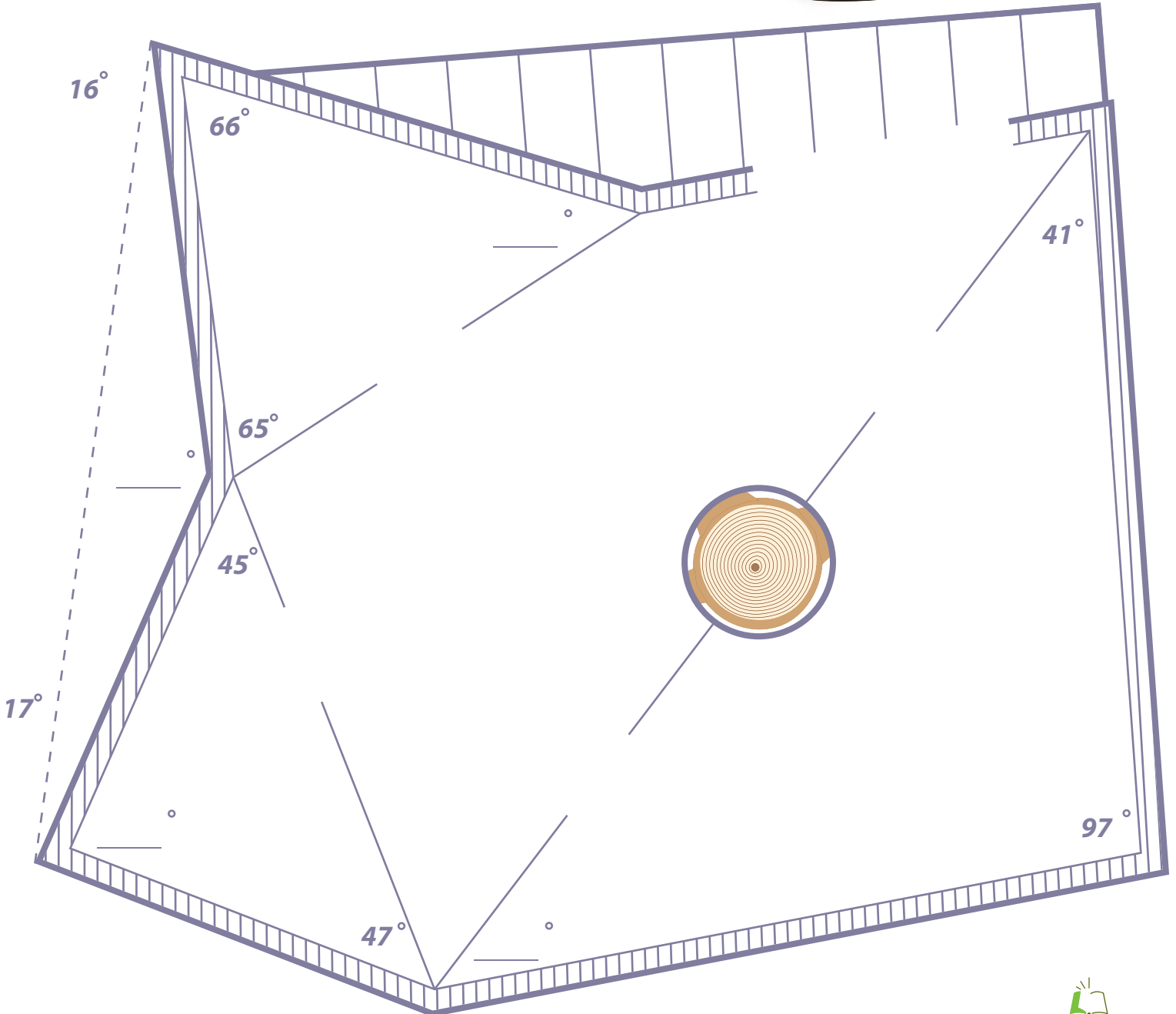




Treehouse Triangles

#2

Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!

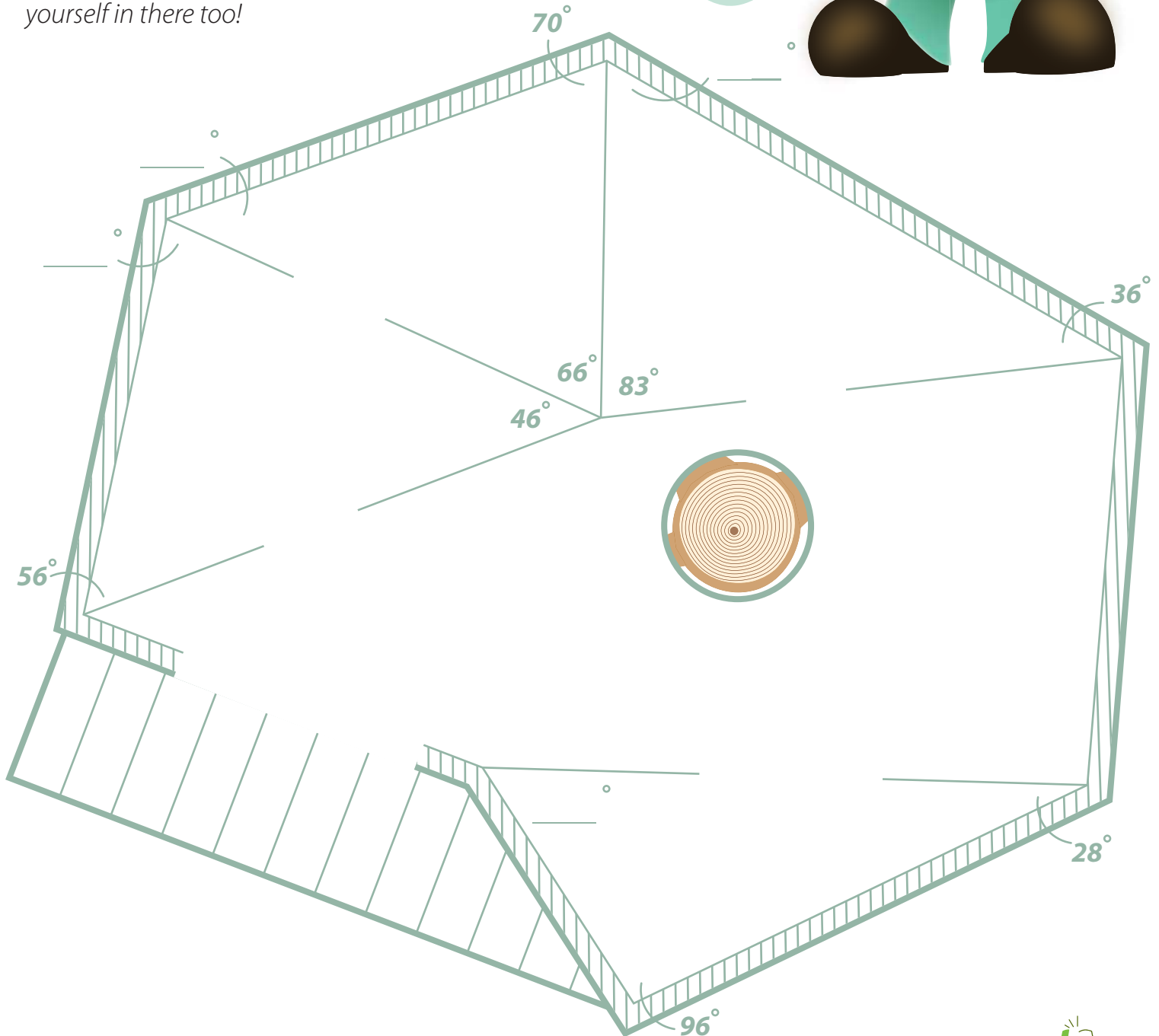




Treehouse Triangles

Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!

#3



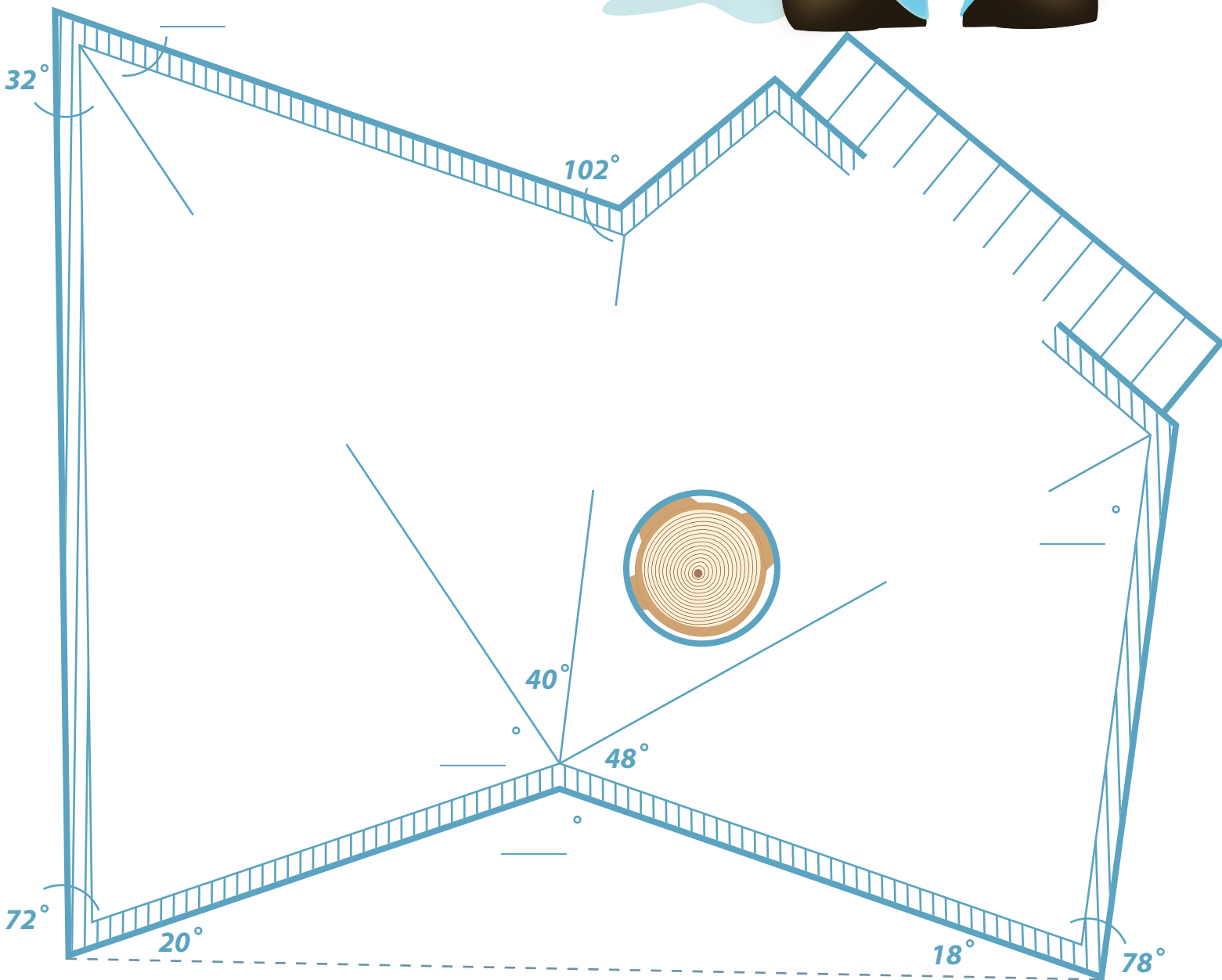


Treehouse Triangles

#4



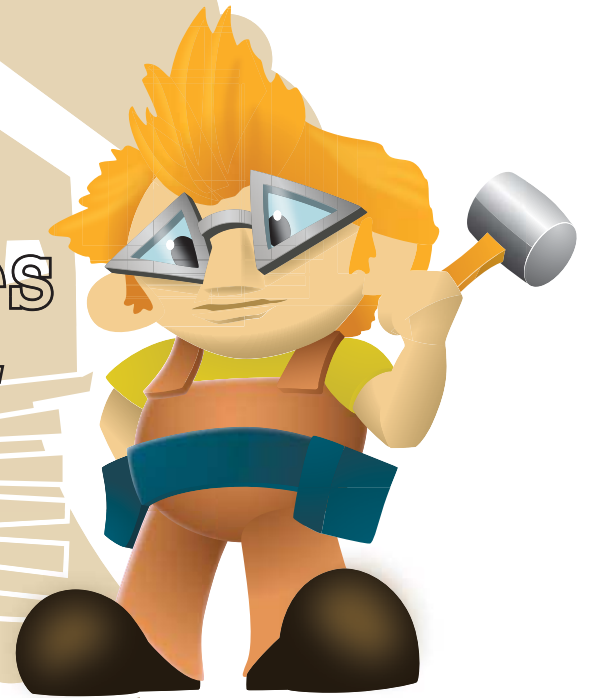
Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!



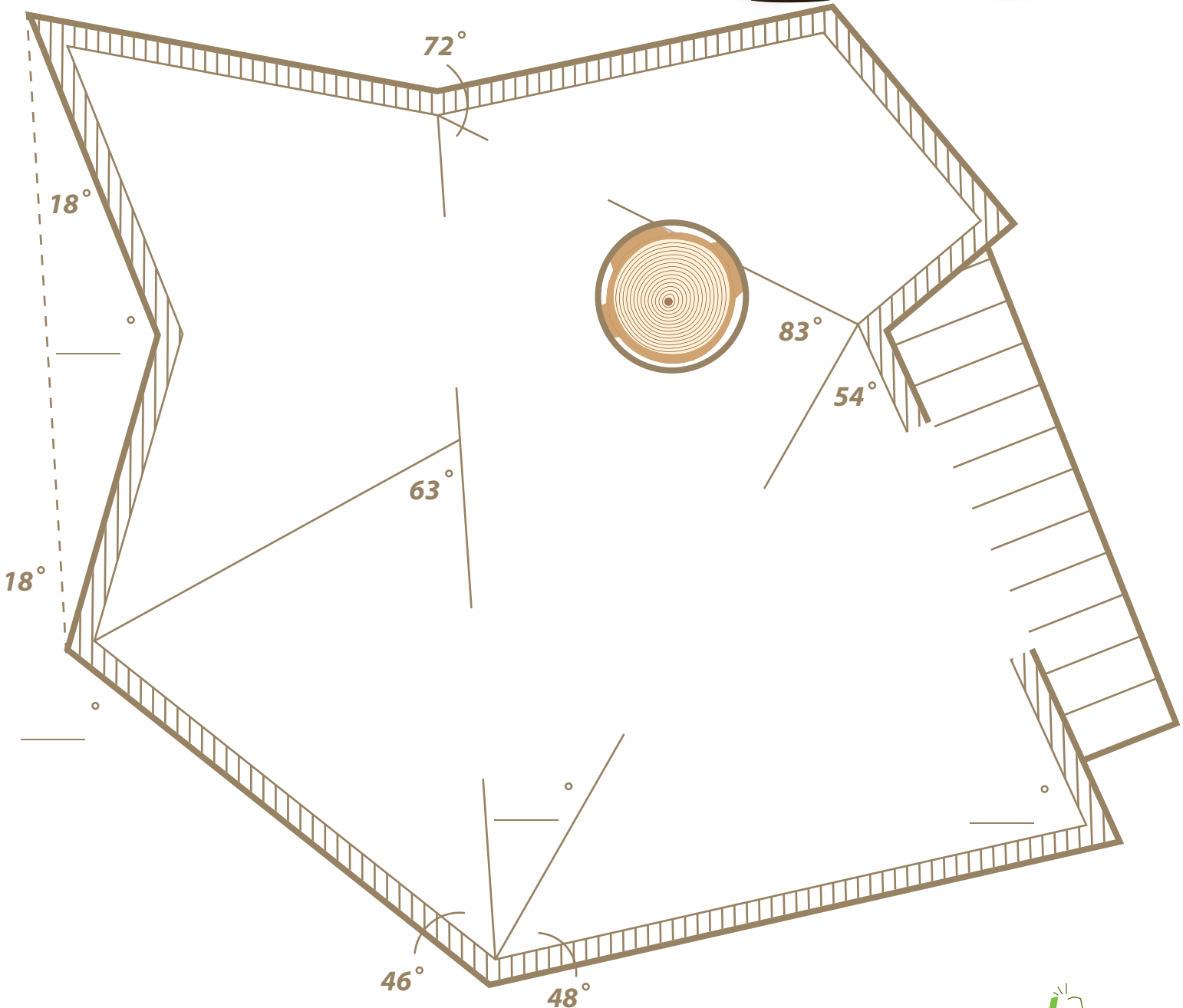


Treehouse Triangles

#5



Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!



Acute Triangle: Find the Missing Base

Use the clues provided to find the base of each triangle. Show your work.

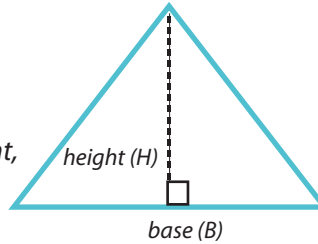
Review:

Triangle Area = $\frac{1}{2}$ x base x height

The base of a triangle can be any one of its sides.

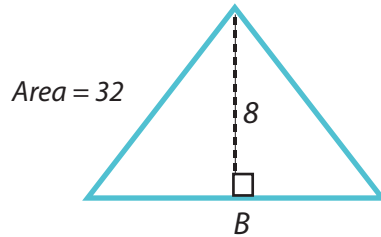
The height is the distance from a base to its opposite point, or vertex.

A base must be perpendicular to its height.



Acute Triangle is a triangle that has three acute angles (angles that measure between 0 and 90 degrees).

Example:



$$\text{Area} = \frac{32}{2} \text{ sq.ft.}$$

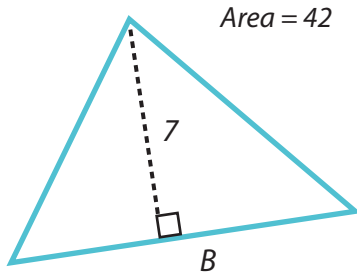
$$\text{Height} = 8 \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$32 = \frac{1}{2} \times \text{base} \times 8$$

$$\text{Therefore, base} = \frac{32 \times 2}{8} = 8 \text{ ft.}$$

1



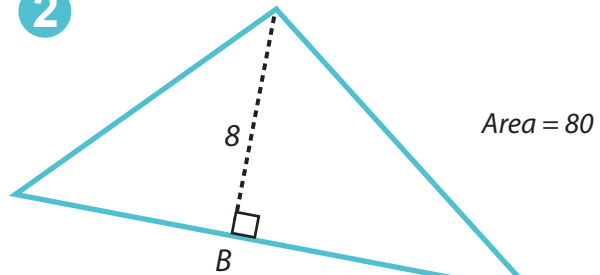
$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

2



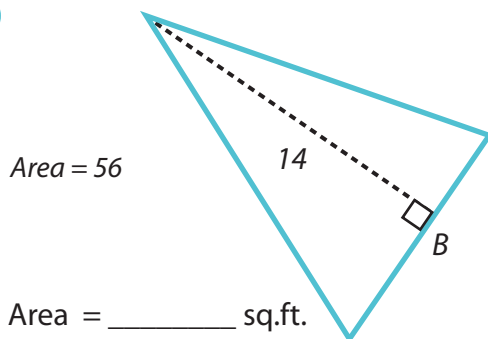
$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

3



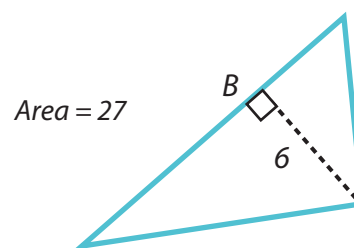
$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

4



$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

Obtuse Triangle: Find the Missing Base

Use the clues provided to find the base of each triangle. Show your work.

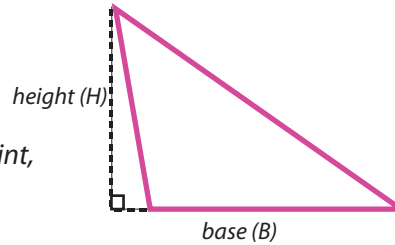
Review:

$$\text{Triangle Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

The base of a triangle can be any one of its sides.

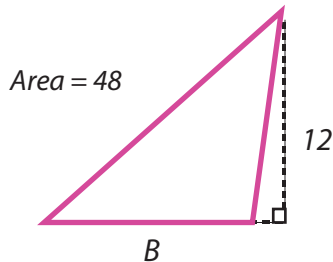
The height is the distance from a base to its opposite point, or vertex.

A base must be perpendicular to its height.



Obtuse Triangle is a triangle that has one obtuse angle (angle that measures between 90 and 180 degrees).

Example:



$$\text{Area} = \frac{48}{2} \text{ sq.ft.}$$

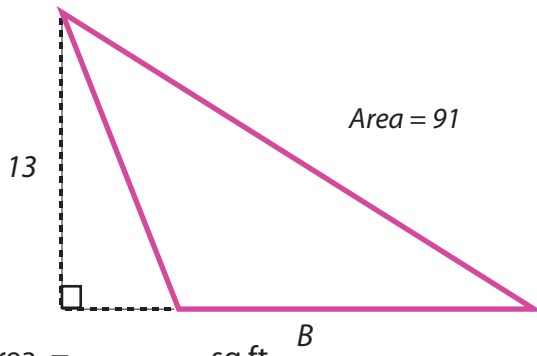
$$\text{Height} = \frac{12}{2} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$48 = \frac{1}{2} \times \text{base} \times 12$$

$$\text{Therefore, base} = \frac{48 \times 2}{12} = \underline{8} \text{ ft.}$$

1



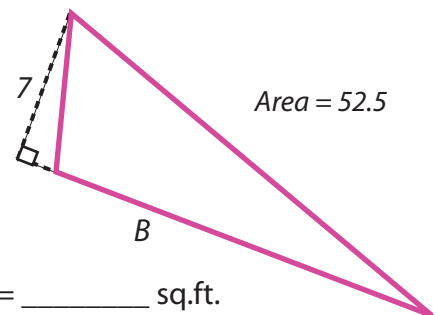
$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

2



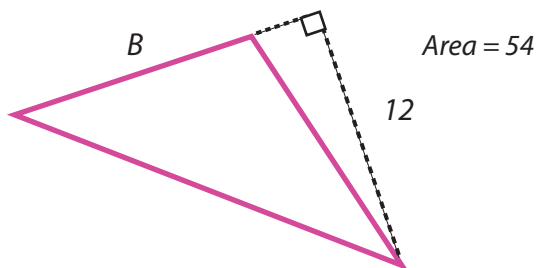
$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

3



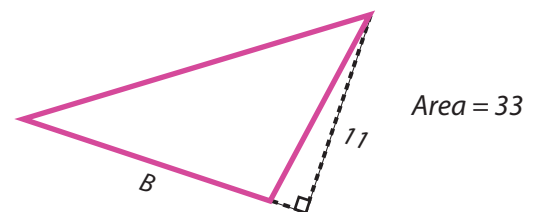
$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

4



$$\text{Area} = \underline{\hspace{2cm}} \text{ sq.ft.}$$

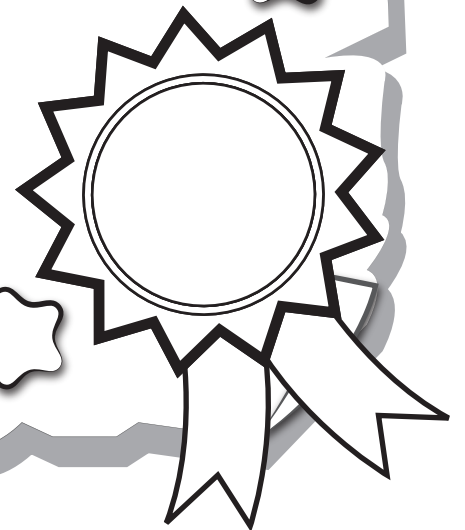
$$\text{Height} = \underline{\hspace{2cm}} \text{ ft.}$$

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Therefore, base} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ft.}$$

Great job!

is an Education.com math superstar



Answer Sheets

What's Your Angle?

Aye Aye, Area! #1

Aye Aye, Area! #2

Aye Aye, Area! #3

Aye Aye, Area! #4

Aye Aye, Area! #5

Angle Steering

Treehouse Triangles #1

Treehouse Triangles #2

Treehouse Triangles #3

Treehouse Triangles #4

Treehouse Triangles #5

Acute Triangle: Find the Missing Base

Obtuse Triangle: Find the Missing Base

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Answer Sheet

ANSWER SHEET

M A T H
GEOMETRY

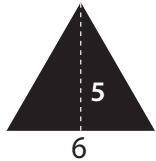


Aye Aye, Area!



Calculate the area of the sail by finding the areas of the smaller triangles.

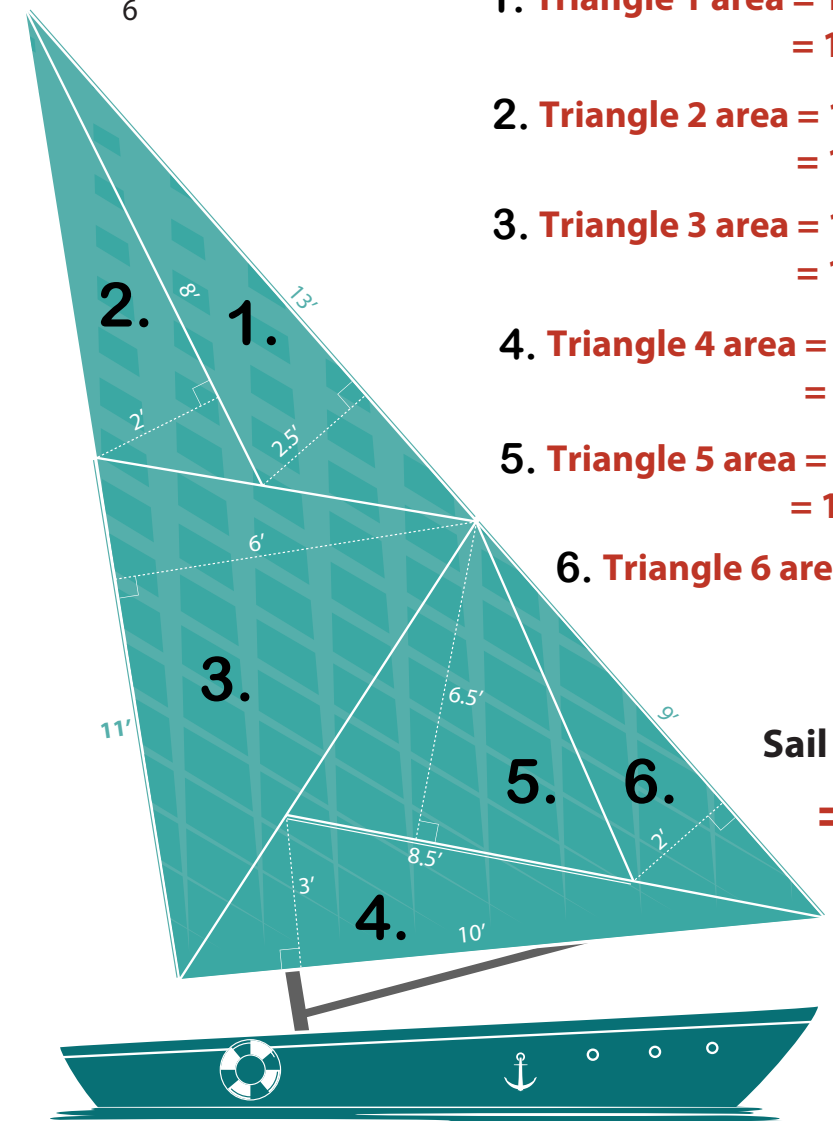
Remember, **triangle area = $\frac{1}{2}$ (base x height)**



$$\text{Area} = \frac{1}{2} (6 \times 5) = 15 \text{ square feet}$$

- Triangle 1 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (13 \times 2.5) = \frac{1}{2} \times 32.5 = 16.25$
- Triangle 2 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (8 \times 2) = \frac{1}{2} \times 16 = 8$
- Triangle 3 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (11 \times 6) = \frac{1}{2} \times 66 = 33$
- Triangle 4 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (10 \times 3) = \frac{1}{2} \times 30 = 15$
- Triangle 5 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (8.5 \times 6.5) = \frac{1}{2} \times 55.25 = 27.63$
- Triangle 6 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (9 \times 2) = \frac{1}{2} \times 18 = 9$

$$\begin{aligned} \text{Sail area:} &= 16.25 + 8 + 33 + 15 + 27.63 + 9 \\ &= \underline{\underline{108.88 \text{ square feet}}} \end{aligned}$$



Answer Sheet

ANSWER SHEET

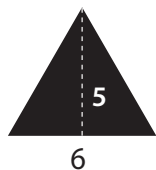
M A T H
G E O M E T R Y

Aye Aye, Area!



Calculate the area of the sail by finding the areas of the smaller triangles.

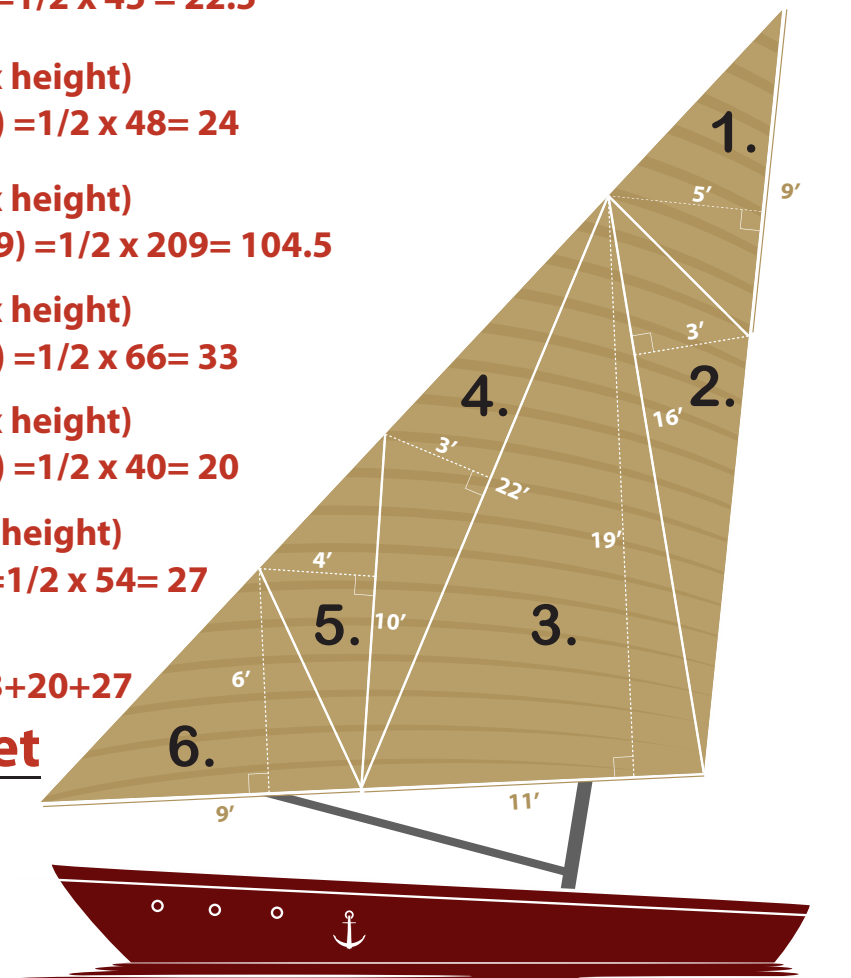
Remember, **triangle area = $\frac{1}{2}$ (base x height)**



$$\text{Area} = \frac{1}{2} (6 \times 5) = 15 \text{ square feet}$$

- Triangle 1 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (9 \times 5) = \frac{1}{2} \times 45 = 22.5$
- Triangle 2 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (16 \times 3) = \frac{1}{2} \times 48 = 24$
- Triangle 3 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (11 \times 19) = \frac{1}{2} \times 209 = 104.5$
- Triangle 4 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (22 \times 3) = \frac{1}{2} \times 66 = 33$
- Triangle 5 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (10 \times 4) = \frac{1}{2} \times 40 = 20$
- Triangle 6 area = $\frac{1}{2}$ (base x height)**
 $= \frac{1}{2} (9 \times 6) = \frac{1}{2} \times 54 = 27$

Sail area: = $22.5 + 24 + 104.5 + 33 + 20 + 27$
= 231 square feet



Answer Sheet

M A T H
G E O M E T R Y



Aye Aye, Area!



ANSWER SHEET

Calculate the area of the sail by finding the areas of the smaller triangles.

Remember, **triangle area = $\frac{1}{2}$ (base x height)**

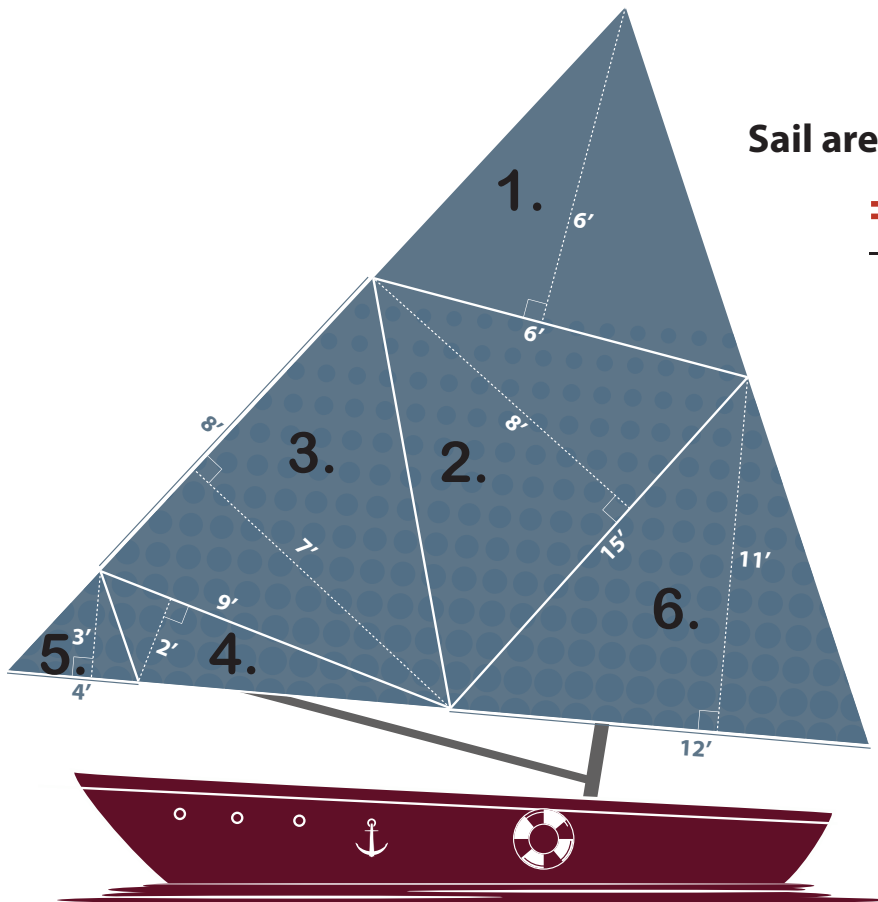


Area = $\frac{1}{2}$ (6x5) = 15 square feet

- 1. Triangle 1 area = $\frac{1}{2}$ (base x height)**
= $\frac{1}{2}$ (6 x 6) = $\frac{1}{2}$ x 36 = 18
- 2. Triangle 2 area = $\frac{1}{2}$ (base x height)**
= $\frac{1}{2}$ (15 x 8) = $\frac{1}{2}$ x 120 = 60
- 3. Triangle 3 area = $\frac{1}{2}$ (base x height)**
= $\frac{1}{2}$ (8 x 7) = $\frac{1}{2}$ x 56 = 28
- 4. Triangle 4 area = $\frac{1}{2}$ (base x height)**
= $\frac{1}{2}$ (9 x 2) = $\frac{1}{2}$ x 18 = 9
- 5. Triangle 5 area = $\frac{1}{2}$ (base x height)**
= $\frac{1}{2}$ (4 x 3) = $\frac{1}{2}$ x 12 = 6
- 6. Triangle 6 area = $\frac{1}{2}$ (base x height)**
= $\frac{1}{2}$ (12 x 11) = $\frac{1}{2}$ x 132 = 66

Sail area: = 18+60+28+9+6+66

= 187 square feet



Answer Sheet

M A T H
G E O M E T R Y



Aye Aye, Area!



ANSWER SHEET

Calculate the area of the sails by finding the areas of the smaller triangles.

Remember, **triangle area = $1/2$ (base x height)**



Area = $1/2$ (6x5) = 15 square feet

1. Triangle 1 area = $1/2$ (11 x 4) = $1/2$ x 44 = 22
2. Triangle 2 area = $1/2$ (21 x 8) = $1/2$ x 168 = 84
3. Triangle 3 area = $1/2$ (21 x 7) = $1/2$ x 147 = 73.5
4. Triangle 4 area = $1/2$ (9 x 18) = $1/2$ x 162 = 81

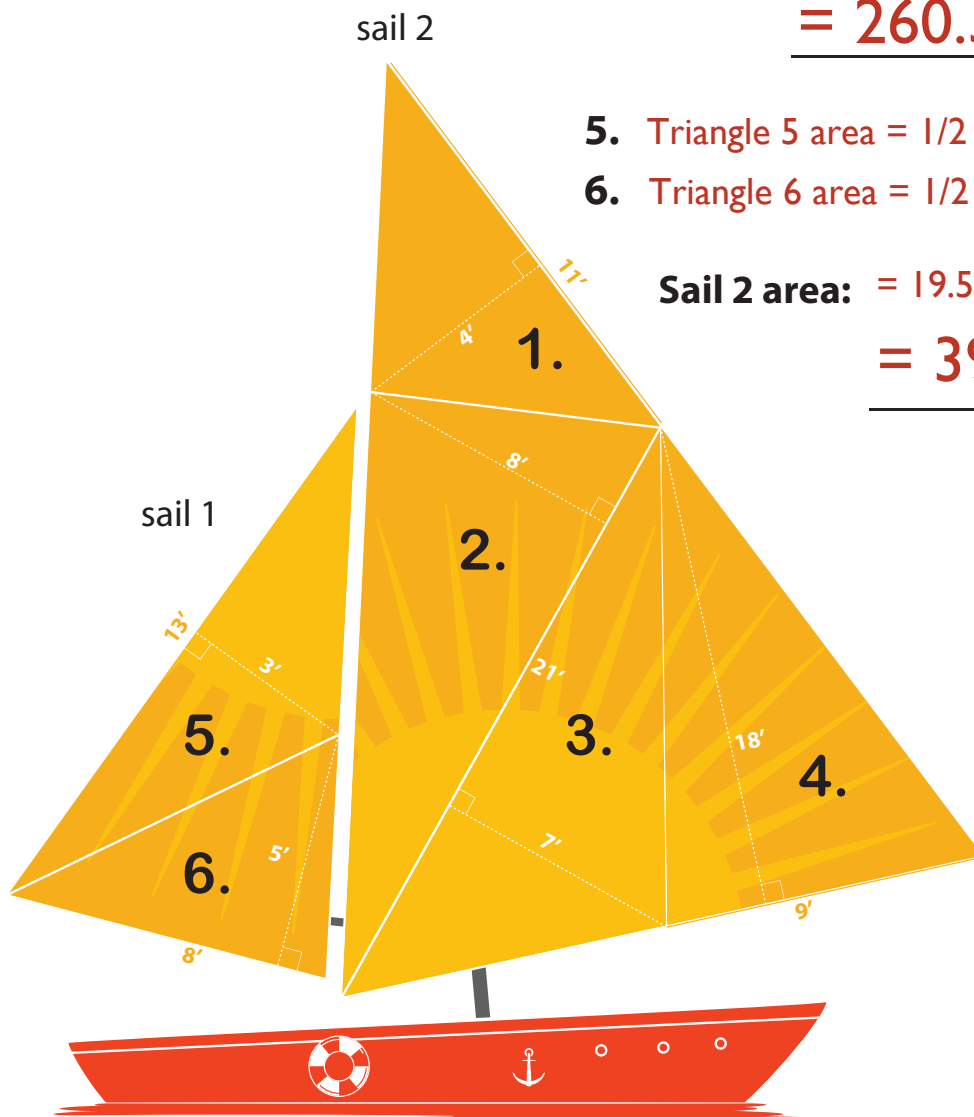
Sail 1 area: = 22 + 84 + 73.5 + 81

= 260.5 square feet

5. Triangle 5 area = $1/2$ (13 x 3) = $1/2$ x 39 = 19.5
6. Triangle 6 area = $1/2$ (8 x 5) = $1/2$ x 40 = 20

Sail 2 area: = 19.5 + 20

= 39.5 square feet



Answer Sheet

M A T H
G E O M E T R Y



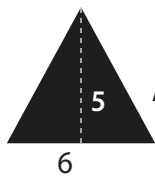
ANSWER SHEET

Aye Aye, Area!



Calculate the area of the sails by finding the areas of the smaller triangles.

Remember, **triangle area = $1/2$ (base x height)**



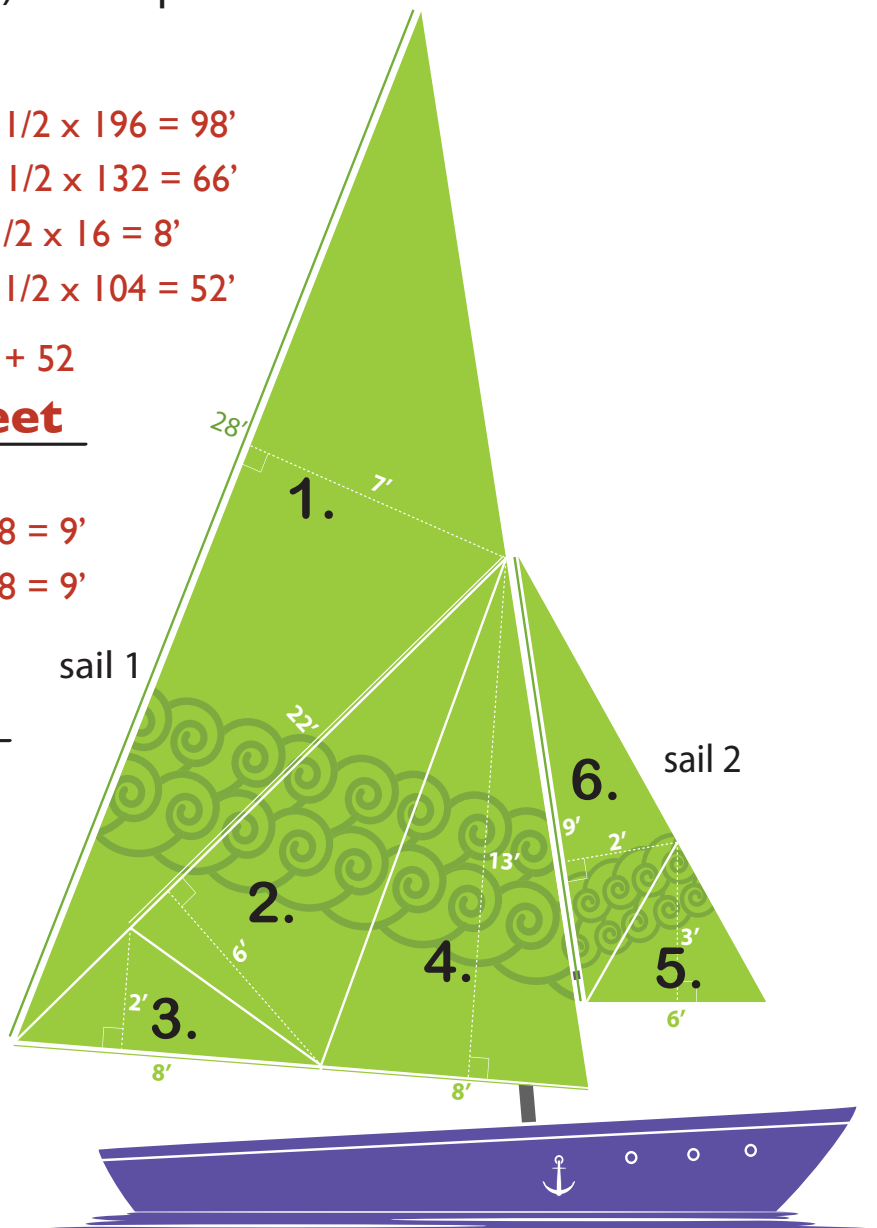
$$\text{Area} = \frac{1}{2} (6 \times 5) = 15 \text{ square feet}$$

1. Triangle 1 area = $1/2(28 \times 7) = 1/2 \times 196 = 98'$
2. Triangle 2 area = $1/2(22 \times 6) = 1/2 \times 132 = 66'$
3. Triangle 3 area = $1/2(8 \times 2) = 1/2 \times 16 = 8'$
4. Triangle 4 area = $1/2(8 \times 13) = 1/2 \times 104 = 52'$

$$\begin{aligned} \text{Sail 1 area:} &= 98 + 66 + 8 + 52 \\ &= \underline{\underline{224 \text{ square feet}}} \end{aligned}$$

5. Triangle 5 = $1/2(6 \times 3) = 1/2 \times 18 = 9'$
6. Triangle 6 = $1/2(9 \times 2) = 1/2 \times 18 = 9'$

$$\begin{aligned} \text{Sail 2 area:} &= 9 + 9 \\ &= \underline{\underline{18 \text{ square feet}}} \end{aligned}$$



Answer Sheet

M A T H
G E O M E T R Y

Answer Sheet

ANGLE STEERING

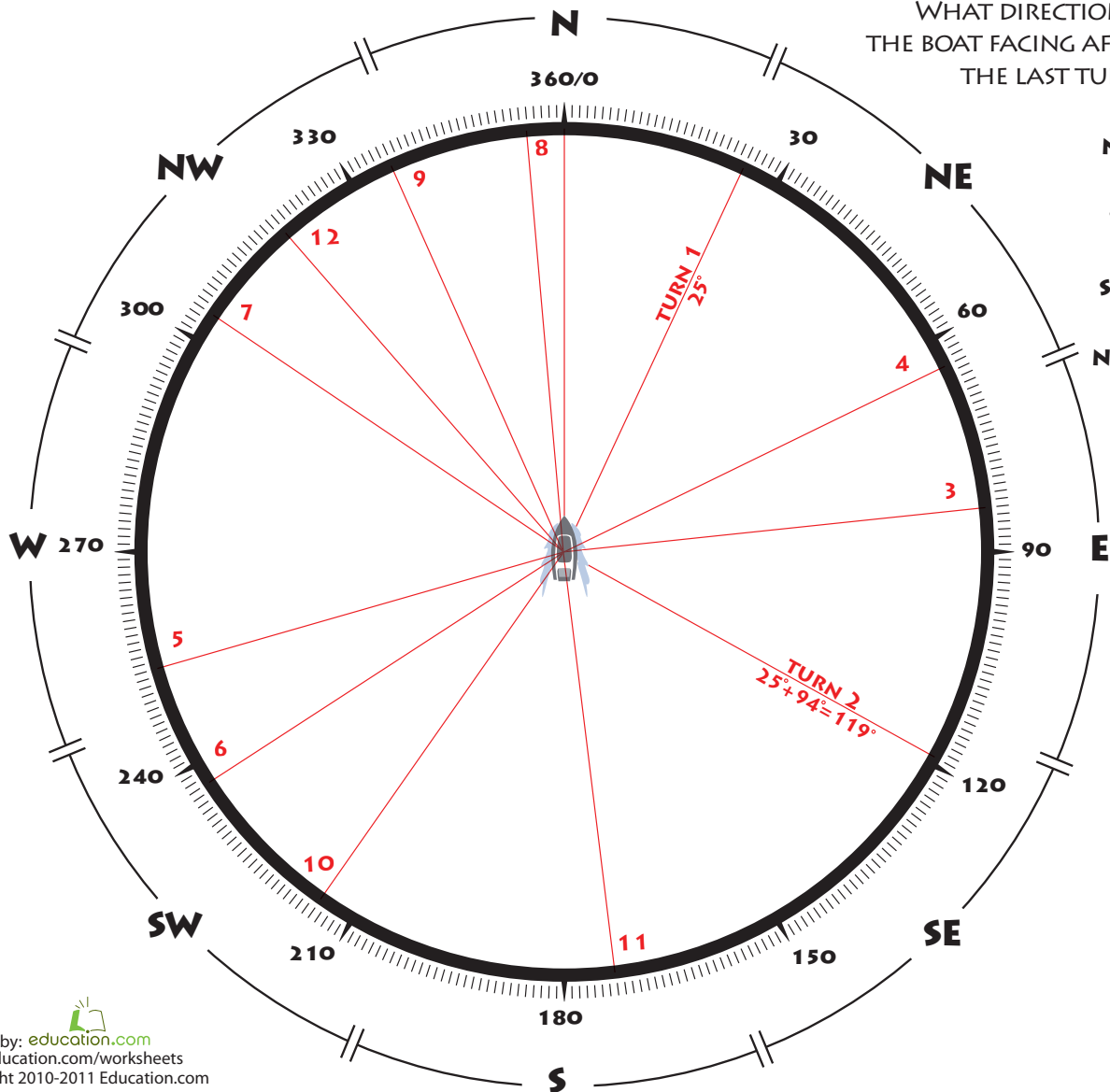


Steering a ship requires practice and precision. It also requires you to think about math and angles.

Turn the ship's wheel according to the angle measurements given. See the examples below. With each new turn, indicate the ship's new direction by drawing a line towards it. Turn clockwise if the angle is positive, counterclockwise if it is negative. Use a ruler to help you draw straight lines.



	1	2	3	4	5	6	7	8	9	10	11	12
Turn Degrees	+25°	+94°	-35°	-20°	+190°	-17°	+67°	+51°	-19°	-121°	-42°	+146°
New Direction	25°	119°	84°	64°	254°	237°	304°	355°	336°	215°	173°	319°



WHAT DIRECTION IS THE BOAT FACING AFTER THE LAST TURN?

- N
- NE
- E
- SE
- S
- SW
- W
- NW

Answer Sheet

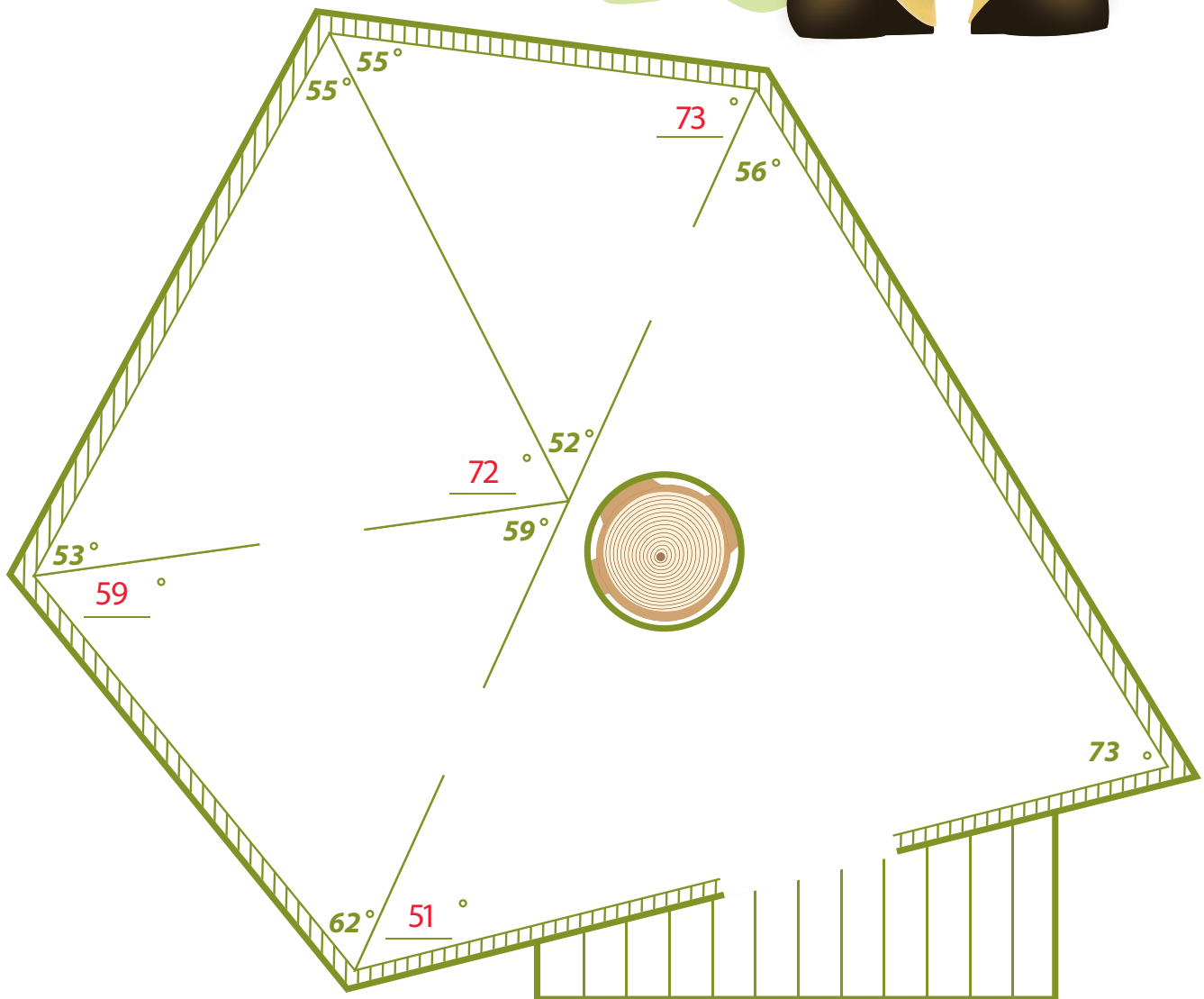
MATH
GEOMETRY

ANSWERS

Treehouse Triangles

Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!

#1



Answer Sheet

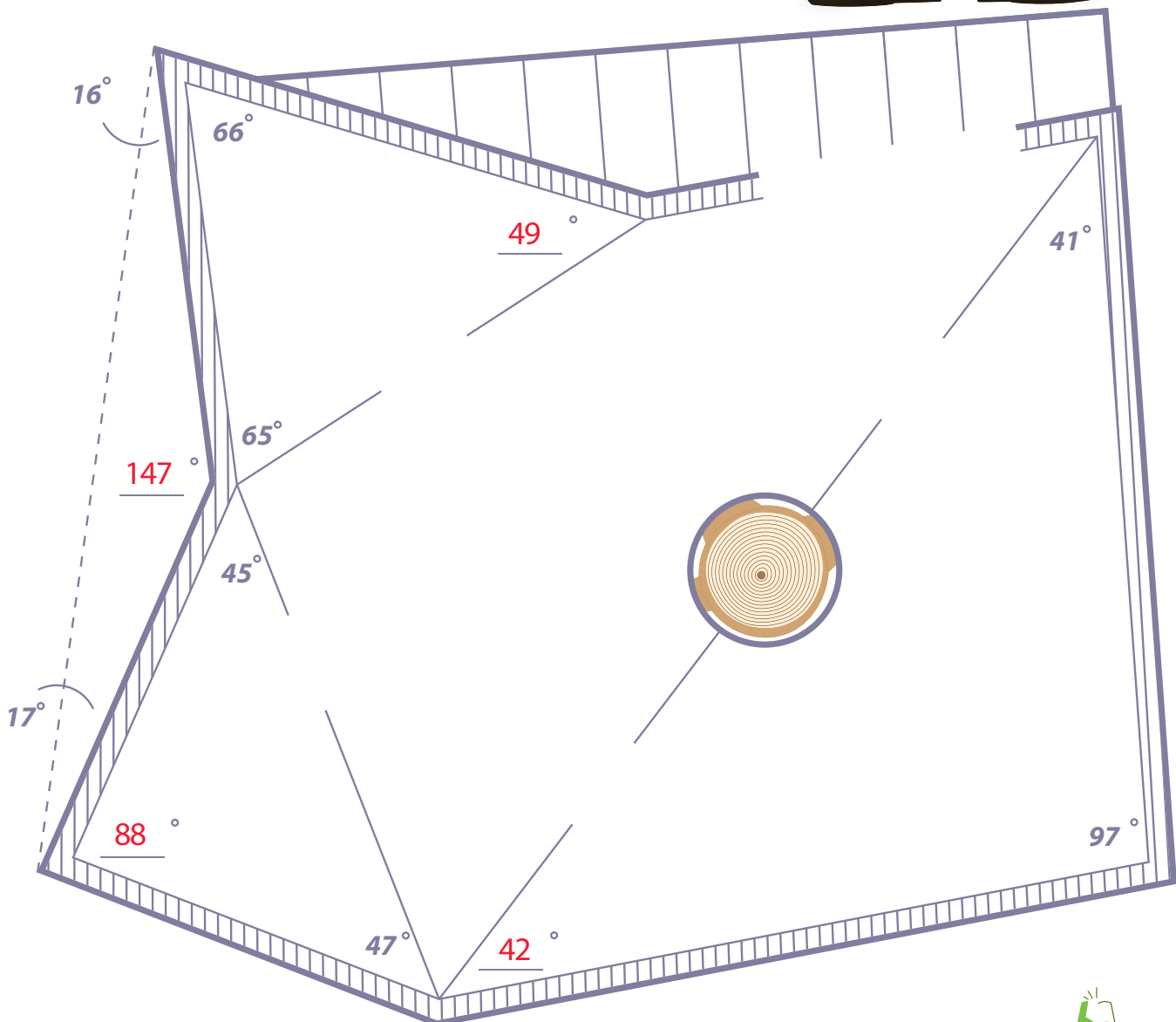
MATH
GEOMETRY

ANSWERS

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#2



Answer Sheet

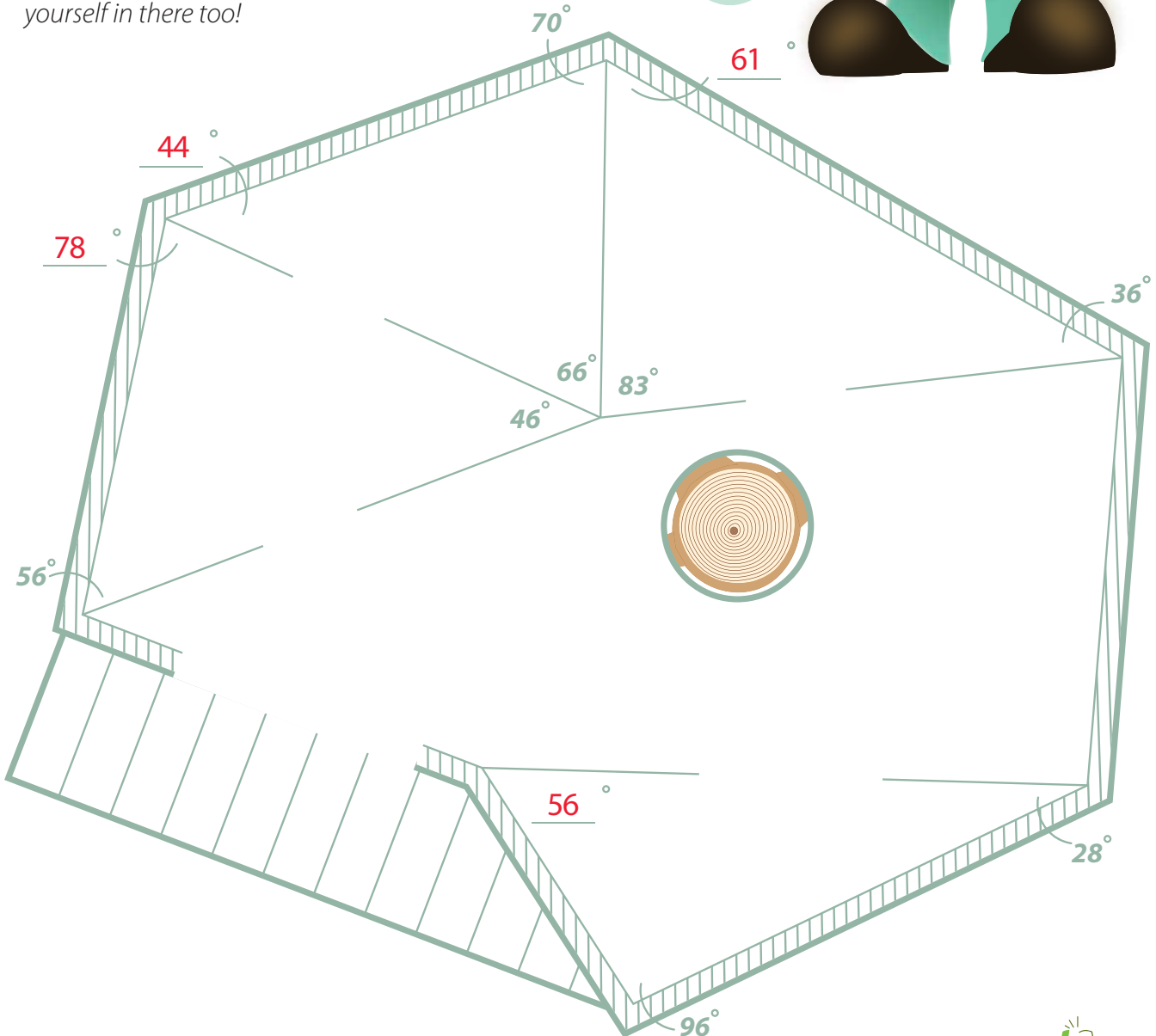
MATH
GEOMETRY

ANSWERS

Treehouse Triangles

Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!

#3



Answer Sheet

MATH
GEOMETRY

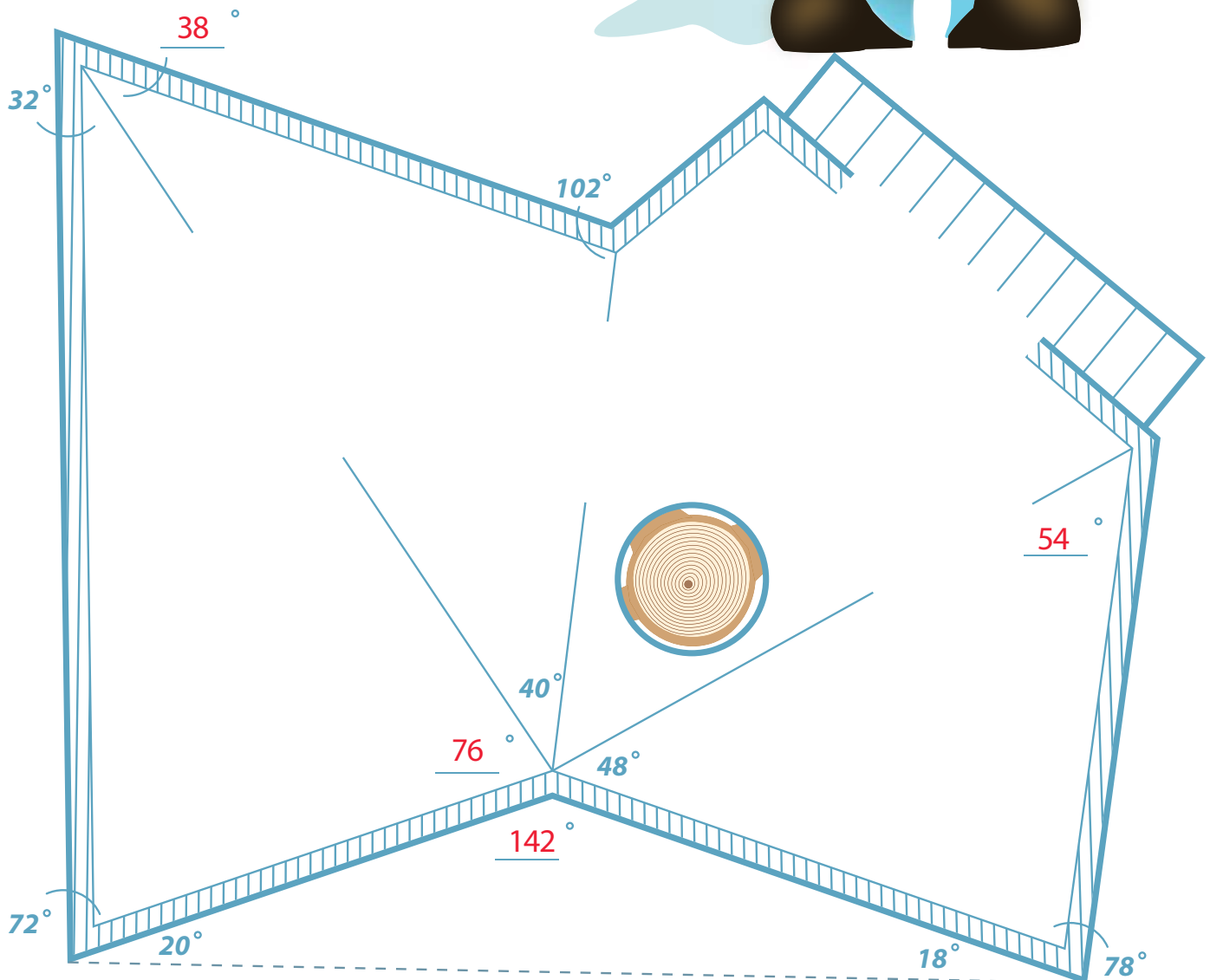
ANSWERS

Treehouse Triangles

#4



Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!



Answer Sheet

MATH
GEOMETRY

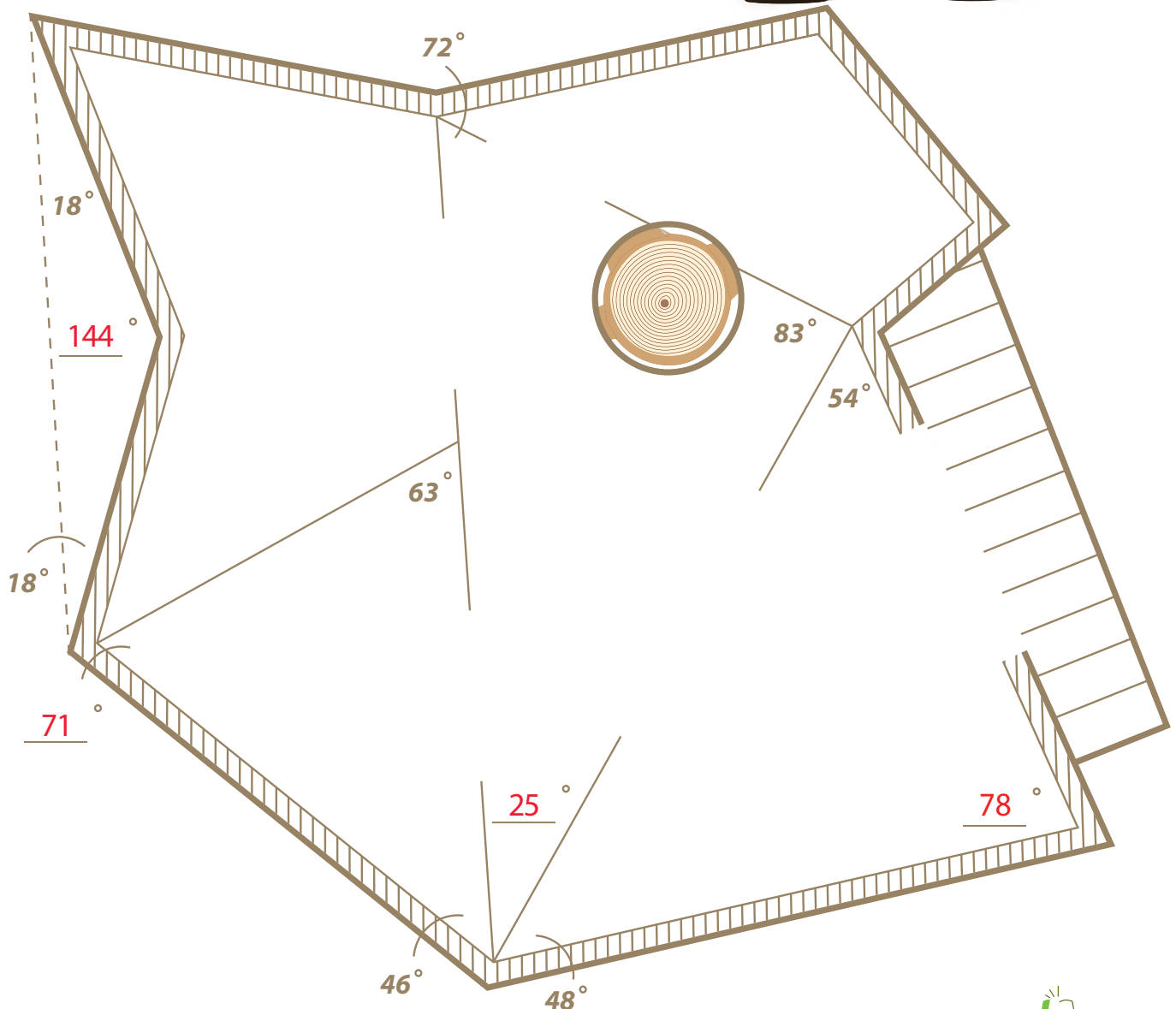
ANSWERS

Treehouse Triangles

#5



Help Buster the Builder find the missing angles of the rooms in the treehouse he is building. Remember, all interior angles in a triangle add up to 180 degrees. When you're done, grab some coloring tools to make your new treehouse plans unique. Add decorations, furniture, appliances, and most importantly, draw yourself in there too!



Answer Sheet

5th Grade

Acute Triangle: Find the missing base

Use the clues provided to find the base of each triangle. Show your work.

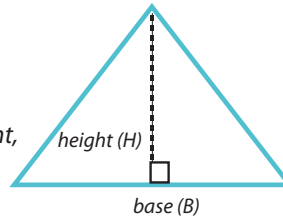
Review:

Triangle Area = $\frac{1}{2} \times \text{base} \times \text{height}$

The base of a triangle can be any one of its sides.

The height is the distance from a base to its opposite point, or vertex.

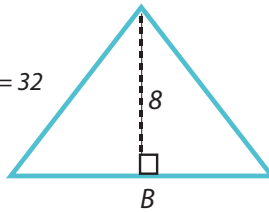
A base must be perpendicular to its height.



Acute Triangle is a triangle that has three acute angles (angles that measure between 0 and 90 degrees).

Example:

Area = 32



Area = $\frac{32}{2}$ sq.ft.

Height = $\frac{8}{2}$ ft.

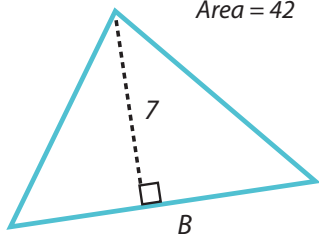
Area = $\frac{1}{2} \times \text{base} \times \text{height}$

$32 = \frac{1}{2} \times \text{base} \times 8$

Therefore, base = $\frac{32 \times 2}{8} = 8$ ft.

1

Area = 42



Area = $\frac{42}{2}$ sq.ft.

Height = $\frac{7}{2}$ ft.

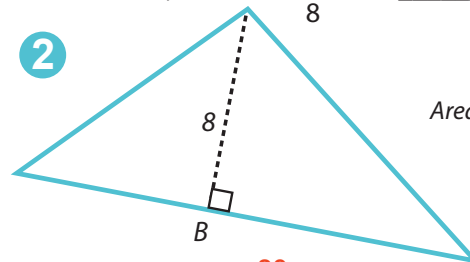
Area = $\frac{1}{2} \times \text{base} \times \text{height}$

$42 = \frac{1}{2} \times B \times 7$

Therefore, base = $\frac{42 \times 2}{7} = 12$ ft.

2

Area = 80



Area = $\frac{80}{2}$ sq.ft.

Height = $\frac{8}{2}$ ft.

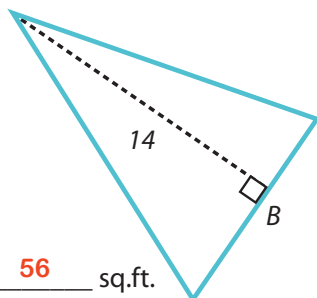
Area = $\frac{1}{2} \times \text{base} \times \text{height}$

$80 = \frac{1}{2} \times B \times 8$

Therefore, base = $\frac{80 \times 2}{8} = 20$ ft.

3

Area = 56



Area = $\frac{56}{2}$ sq.ft.

Height = $\frac{14}{2}$ ft.

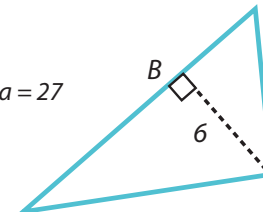
Area = $\frac{1}{2} \times \text{base} \times \text{height}$

$56 = \frac{1}{2} \times B \times 14$

Therefore, base = $\frac{56 \times 2}{14} = 8$ ft.

4

Area = 27



Area = $\frac{27}{2}$ sq.ft.

Height = $\frac{6}{2}$ ft.

Area = $\frac{1}{2} \times \text{base} \times \text{height}$

$27 = \frac{1}{2} \times B \times 6$

Therefore, base = $\frac{27 \times 2}{6} = 9$ ft.

Answer Sheet



Obtuse Triangle: Find the missing base

Use the clues provided to find the base of each triangle. Show your work.

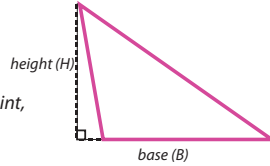
Review:

Triangle Area = $\frac{1}{2}$ x base x height

The base of a triangle can be any one of its sides.

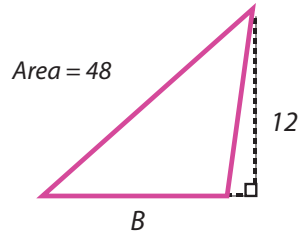
The height is the distance from a base to its opposite point, or vertex.

A base must be perpendicular to its height.



Obtuse Triangle is a triangle that has one obtuse angle (angle that measures between 90 and 180 degrees).

Example:



Area = 48 sq.ft.

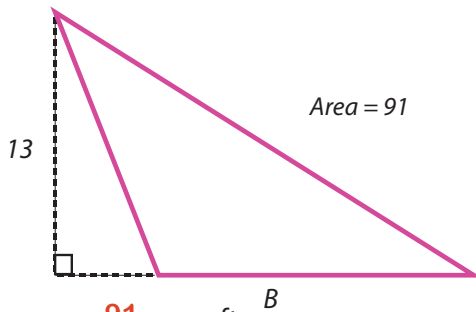
Height = 12 ft.

Area = $\frac{1}{2}$ x base x height

$48 = \frac{1}{2}$ x base x 12

Therefore, base = $\frac{48 \times 2}{12} = \underline{8}$ ft.

1



Area = 91 sq.ft.

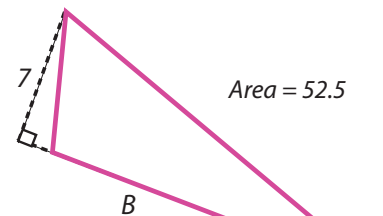
Height = 13 ft.

Area = $\frac{1}{2}$ x base x height

$91 = \frac{1}{2} \times B \times 13$

Therefore, base = $\frac{91 \times 2}{13} = \underline{14}$ ft.

2



Area = 52.5 sq.ft.

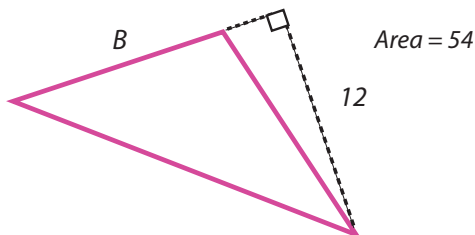
Height = 7 ft.

Area = $\frac{1}{2}$ x base x height

$52.5 = \frac{1}{2} \times B \times 7$

Therefore, base = $\frac{52.5 \times 2}{7} = \underline{15}$ ft.

3



Area = 54 sq.ft.

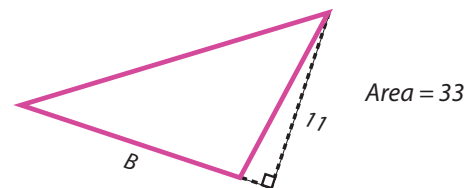
Height = 12 ft.

Area = $\frac{1}{2}$ x base x height

$54 = \frac{1}{2} \times B \times 12$

Therefore, base = $\frac{54 \times 2}{12} = \underline{9}$ ft.

4



Area = 33 sq.ft.

Height = 11 ft.

Area = $\frac{1}{2}$ x base x height

$33 = \frac{1}{2} \times B \times 11$

Therefore, base = $\frac{33 \times 2}{11} = \underline{6}$ ft.