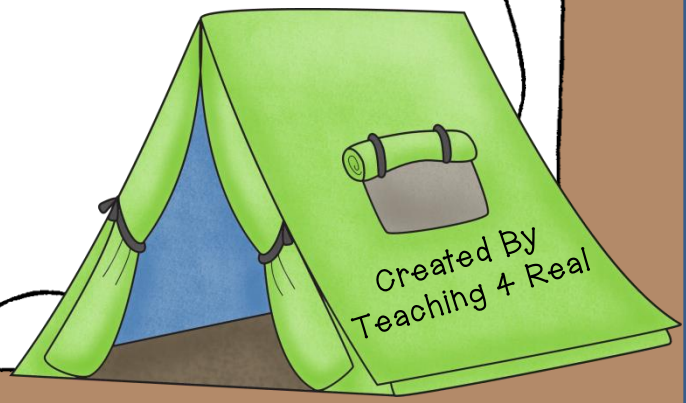
AREA

Regular & Combined Shapes



Teacher Notes

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This product helps students to understand and practice finding area through a variety of models. Students need to see what area actually is and how it relates to multiplication and addition. To further their understanding, I've included how using the distributive property can help to break apart regular and irregular shapes to make finding area easier.

Included:

**Answer Key

2 Visual Posters than can be shown on Power Point or glued into a math journal.

10 practice sheets of varying models and strategies

Area Scoot Game (with answer key)

I hope you enjoy and find this practice helpful! ~ Teaching 4 Real

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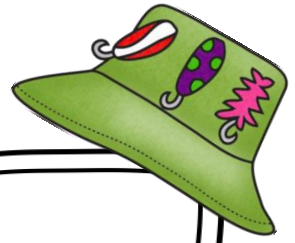
Understanding Distributive Property



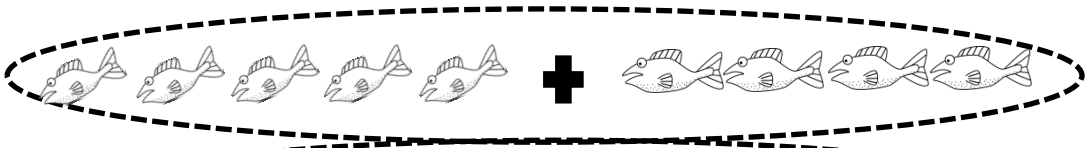
3 x (5 + 4)

Step 1: First, read it like this…. "There are 3 groups of 5 + 4."

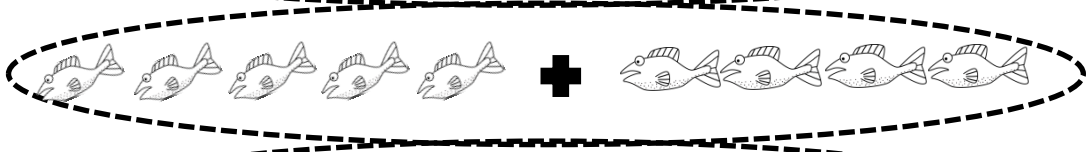
Step 2: Think…What does 5 + 4 look like?

Step 3: Create 3 groups of 5 + 4

Group 1 →



Group 2 →



Group 3 →

Step 4: What is the area of the first array? What is the area of the second array? Add them together for your answer.

(3x5) = 15 (3x4) = 12 so…15+12 = 27

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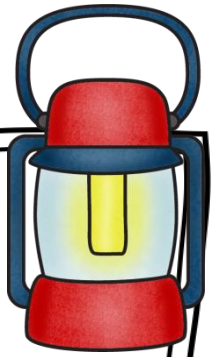
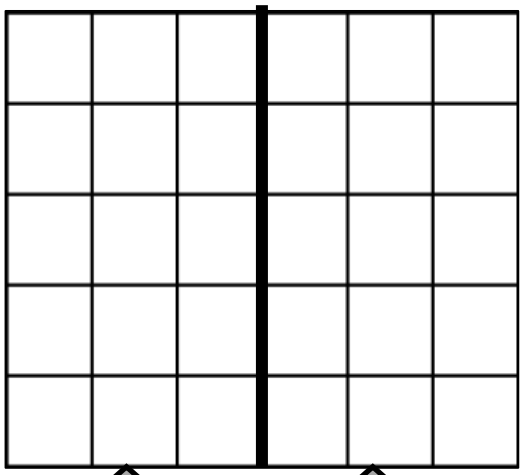
Understanding Distributive Property



How can you solve for area by breaking apart an array into two smaller arrays?

Look... the array is divided into two arrays.



Step 1: Write a multiplication problem for each new array.

Step 2: Add the products of the two arrays to get the total area.

5 x 3
15

+

5 x 3
15

Total Area = 30 square units

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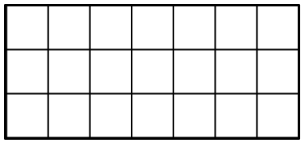
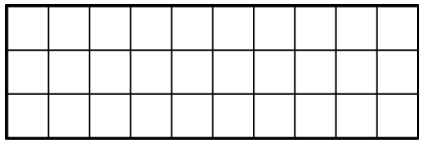


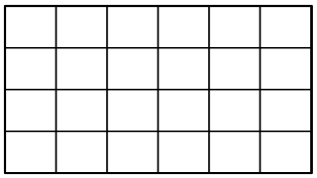
___ + ___ + ___ = ___

So, ___ x ___ = ___



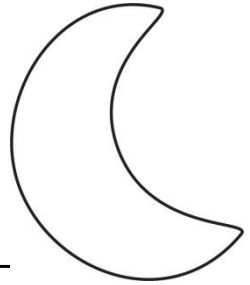
___ + ___ + ___ = ___

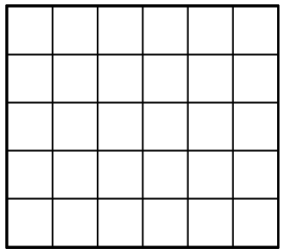
So, ___ x ___ = ___



___ + ___ + ___+ ___ = ___

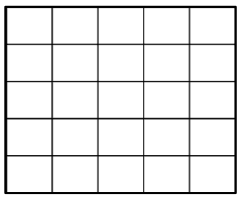
So, ___ x ___ = ___





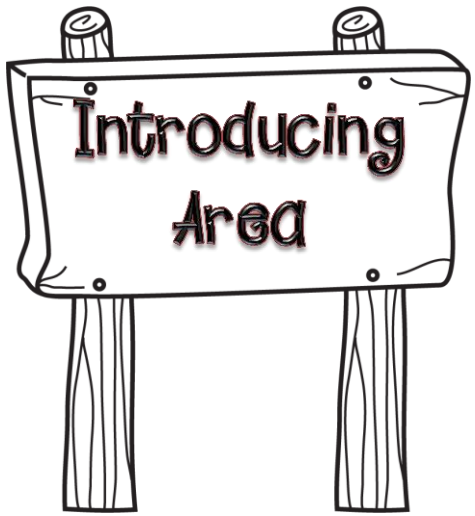
___ + ___ + ___ + ___ + ___ = ___

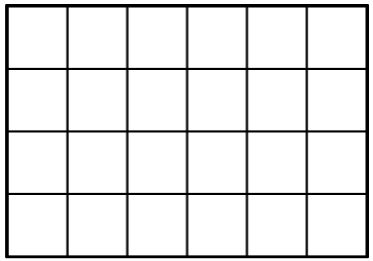
So, ___ x ___ = ___



___ + ___ + ___ + ___ + ___ = ___

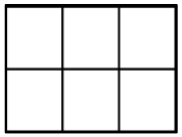
So, ___ x ___ = ___





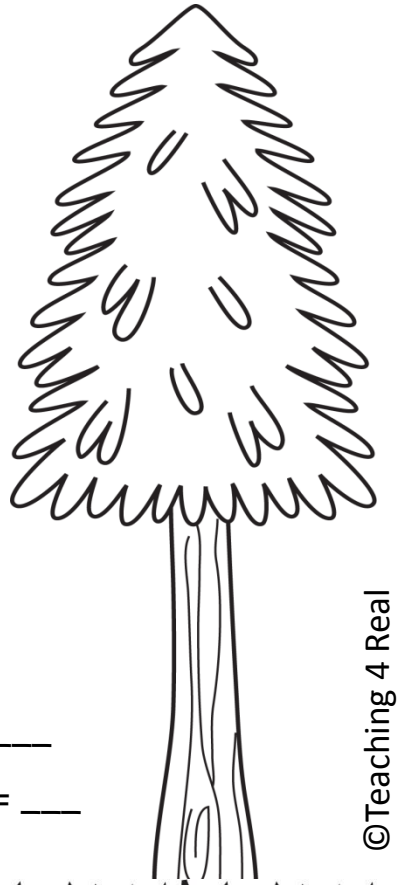
___ + ___ + ___+ ___ = ___

So, ___ x ___ = ___



___ + ___ = ___

So, ___ x ___ = ___



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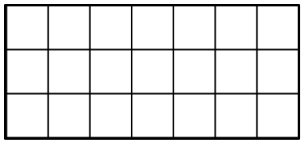
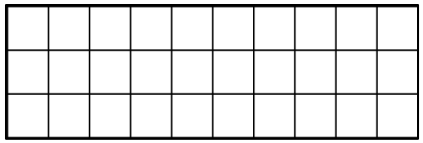


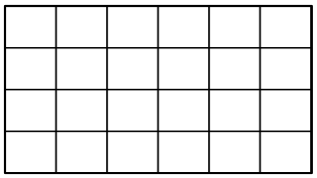
7 + 7 + 7 = 21

So, 3 x 7 = 21 sq units



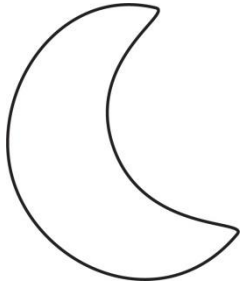
10 + 10 + 10 = 30

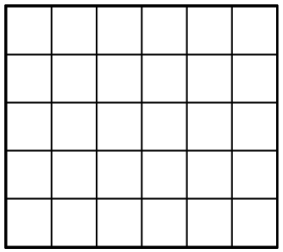
So, 3 x 10 = 30 sq units



6 + 6 + 6 + 6 = 24

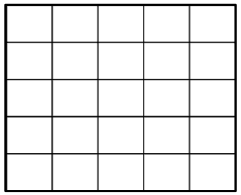
So, 4 x 6 = 24 sq units





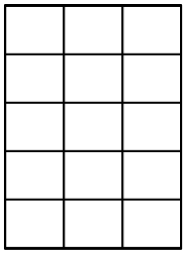
6 + 6 + 6 + 6 + 6 = 30

So, 5 x 6 = 24 sq units



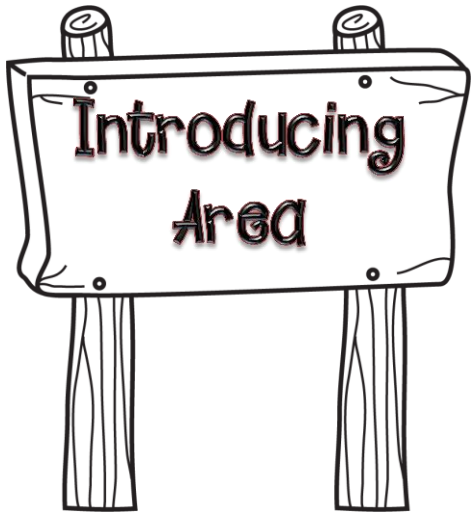
5 + 5 + 5 + 5 + 5 = 25

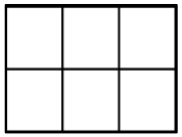
So, 5 x 5 = 25 sq units



3 + 3 + 3 + 3 + 3 = 15

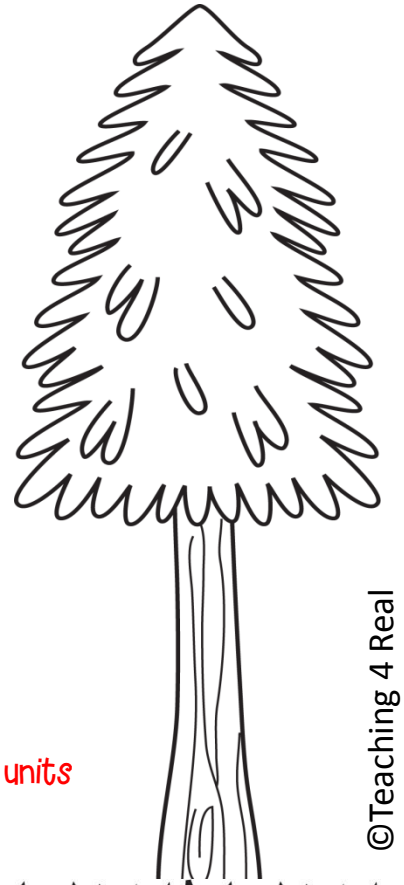
So, 5 x 3 = 15 sq units





3 + 3 = 6

So, 2 x 3 = 6 sq units



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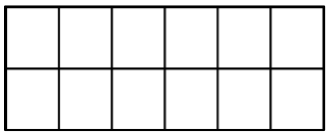
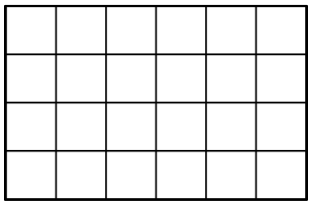
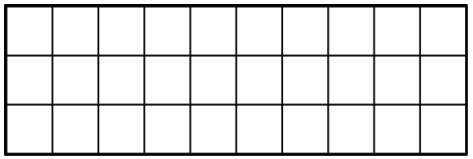
Find the area of each shape. by writing a multiplication problem for each.



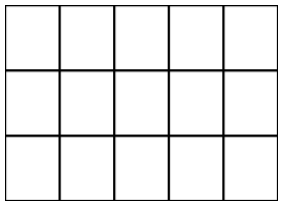
___ x ___ = ___



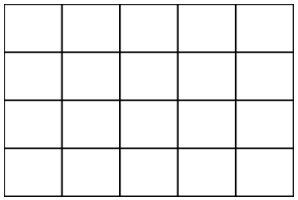
___ x ___ = ___



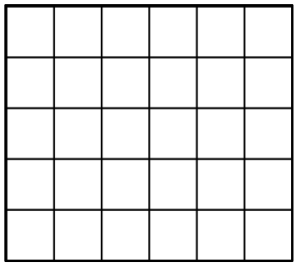
___ x ___ = ___



___ x ___ = ___

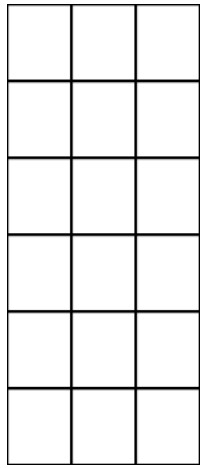


___ x ___ = ___



___ x ___ = ___

___ x ___ = ___



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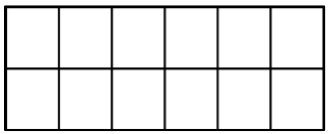
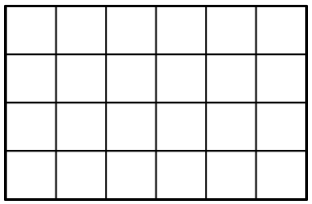
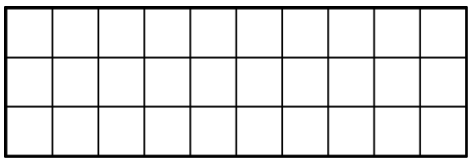
Find the area of each shape. by writing a multiplication problem for each.



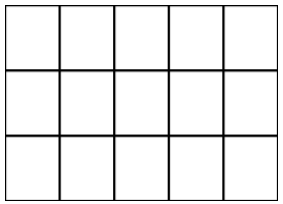
2 x 6 = 12



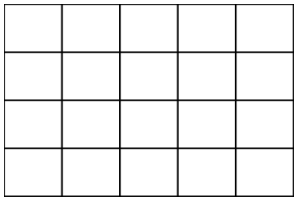
4 x 6 = 24



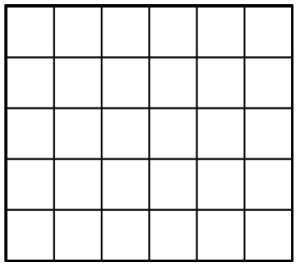
3 x 10 = 30



3 x 5 = 15

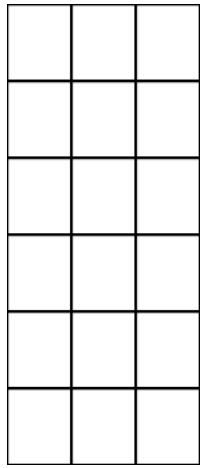


4 x 5 = 20



5 x 6 = 30

6 x 3 = 18



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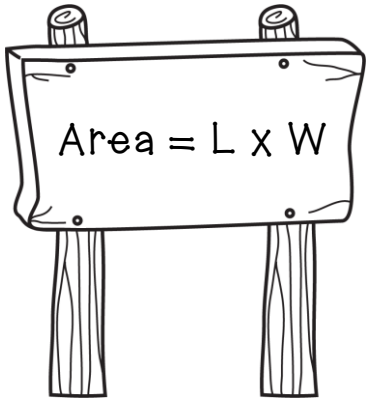

Find the area of each shape.
Check your answer by coloring in one of the rocks below.

8 ft

3 ft

Area = _____

4 ft

9 ft

Area = _____

5 ft

5 ft

Area = _____

6 ft

9 ft

Area = _____

7ft

4 ft

Area = _____

7ft

2 ft

Area = _____

3 ft

11 ft

Area = _____

4 ft

3 ft

Area = _____

36 square feet

14 square feet

24 square feet

28 square feet

33 square feet

12 square feet

54 square feet

25 square feet

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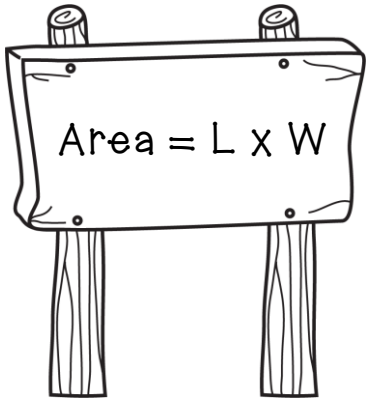
Find the area of each shape.
Check your answer by coloring
in one of the rocks below.

AREA



8 ft

3 ft

Area = 24 sq feet

4 ft

9 ft

Area = 36 sq feet

5 ft

5 ft

Area = 25 sq feet

6 ft

9 ft

Area = 54 sq feet

7ft

4 ft

Area = 28 sq feet

7ft

2 ft

Area = 14 sq feet

3 ft

11 ft

Area = 33 sq feet

4 ft

3 ft

Area = 12 sq feet

36 square feet

14 square feet

24 square feet

28 square feet

33 square feet

12 square feet

54 square feet

25 square feet

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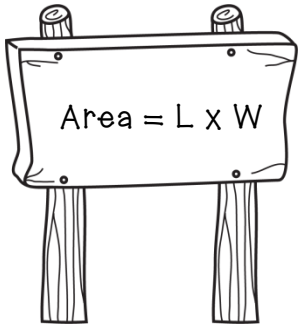

AREA

Find the area of each shape.
Check your answer by coloring in one of the rocks below.

9 ft
2 ft
Area = _____

4 ft
10ft
Area = _____

7 ft
3 ft
Area = _____

6 ft
5 ft
Area = _____

6 ft
6 ft
Area = _____

12ft
2 ft
Area = _____

3 ft
9 ft
Area = _____

5 ft
4 ft
Area = _____

20 square feet

36 square feet

18 square feet

21 square feet

24 square feet

30 square feet

40 square feet

27 square feet

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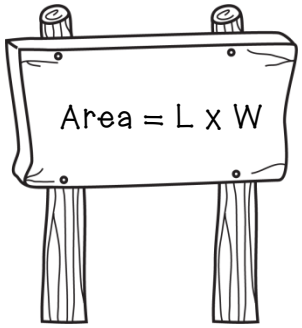
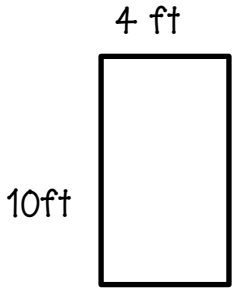


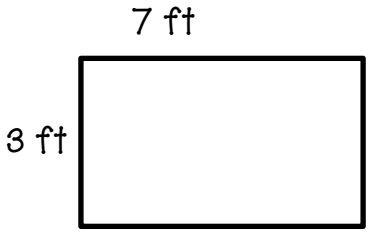
AREA

Find the area of each shape.
Check your answer by coloring in one of the rocks below.

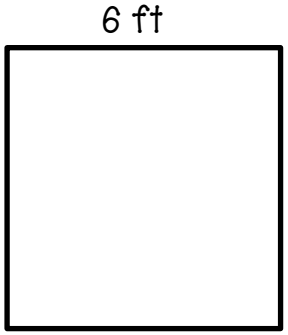
Area = 18 sq feet



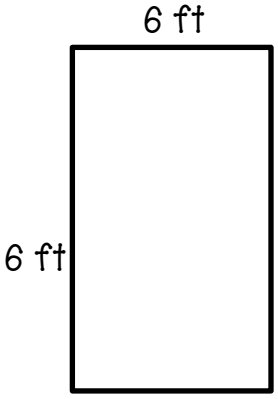
Area = 40 sq feet



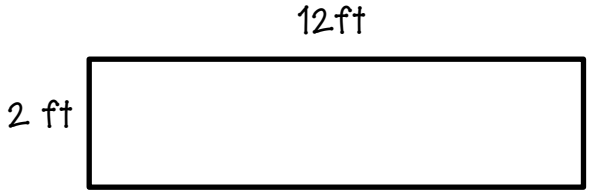
Area = 21 sq feet



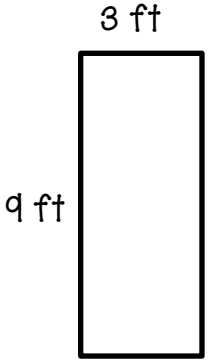
Area = 30 sq feet



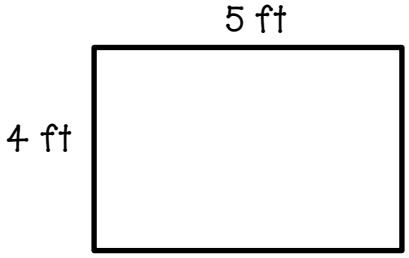
Area = 36 sq feet



Area = 24 square feet



Area = 27 sq feet



Area = 20 sq feet

20 square feet

36 square feet

18 square feet

21 square feet

24 square feet

30 square feet

40 square feet

27 square feet

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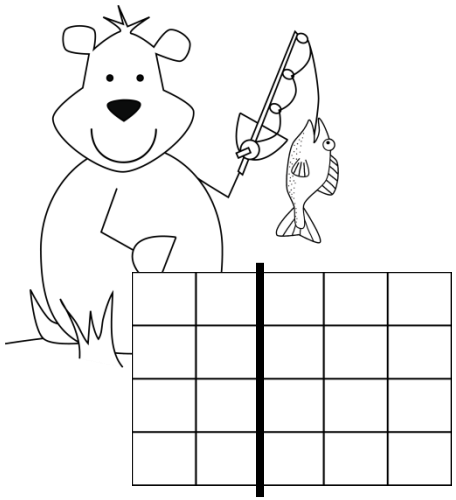
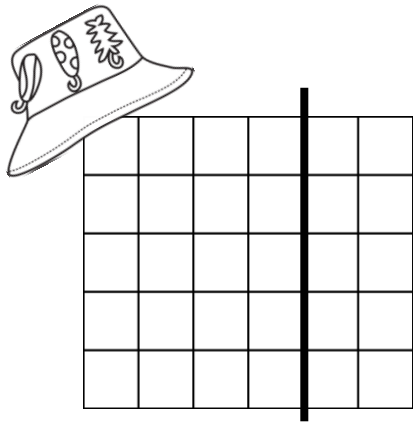


Before ___ x ___ = ___

After (___ x ___) + (___ x ___)

Add their areas ___ + ___ = ___

What factor was broken apart? ___

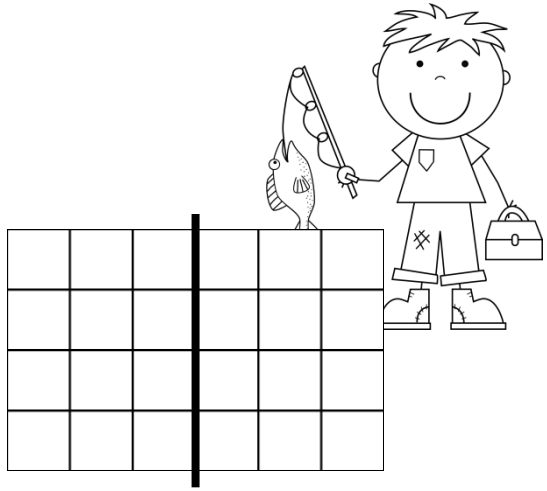


Before ___ x ___ = ___

After (___ x ___) + (___ x ___)

Add their areas ___ + ___ = ___

What factor was broken apart? ___

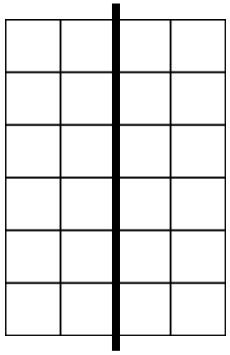


Before ___ x ___ = ___

After (___ x ___) + (___ x ___)

Add their areas ___ + ___ = ___

What factor was broken apart? ___

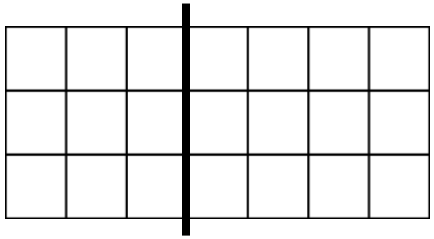


Before ___ x ___ = ___

After (___ x ___) + (___ x ___)

Add their areas ___ + ___ = ___

What factor was broken apart? ___



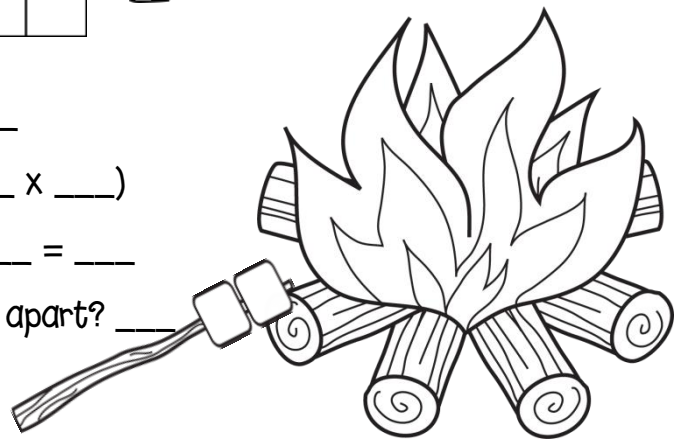
Before ___ x ___ = ___

After (___ x ___) + (___ x ___)

Add their areas ___ + ___ = ___

What factor was broken apart? ___

AREA



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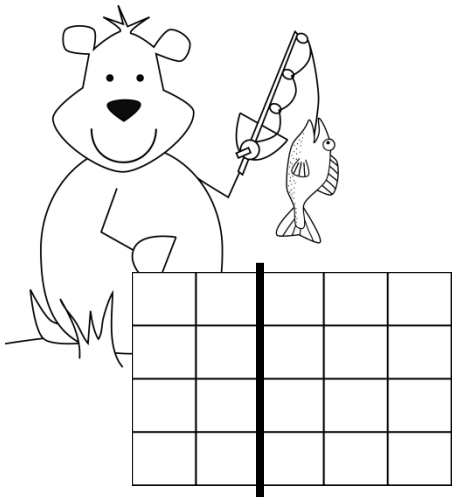
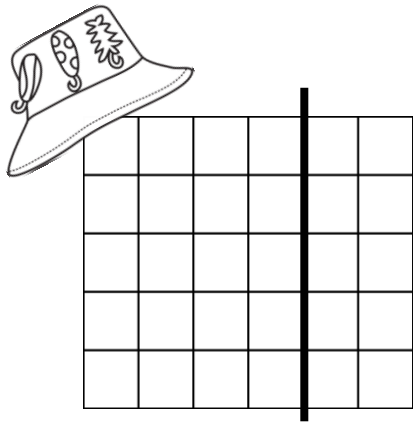


Before 4 x 5 = 20

After (4 x 2) + (4 x 3)

Add their areas: 8 + 12 = 20

What factor was broken apart? 5

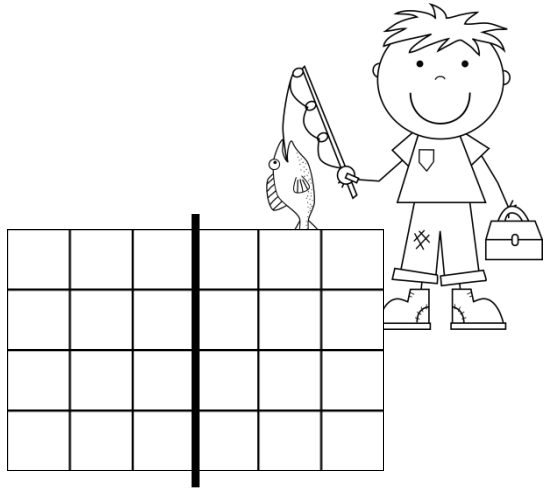


Before 5 x 6 = 30

After (5 x 4) + (5 x 2)

Add their areas: 20 + 10 = 30

What factor was broken apart? 6

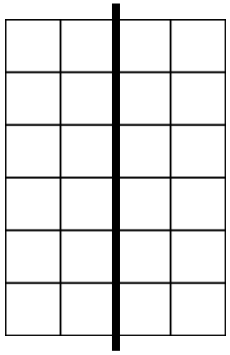


Before 4 x 6 = 24

After (4 x 3) + (4 x 3)

Add their areas: 12+ 12 = 24

What factor was broken apart? 6

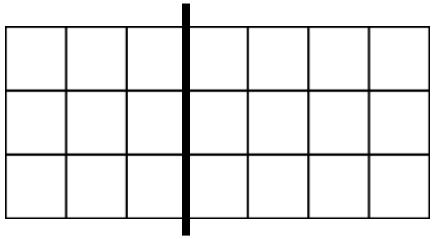


Before 6 x 4 = 24

After (6 x 2) + (6 x 2)

Add their areas: 12 + 12 = 24

What factor was broken apart? 4



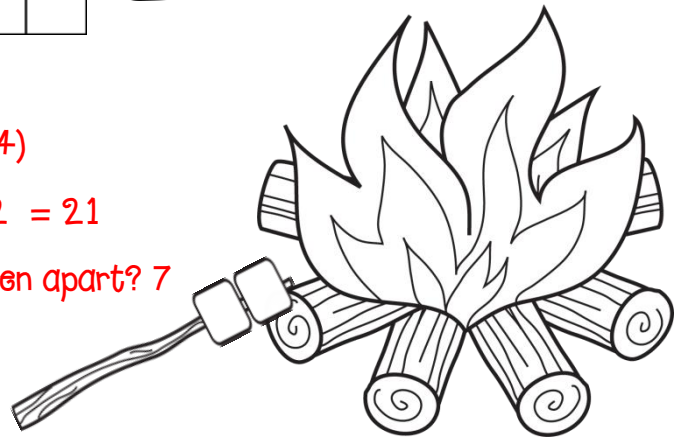
Before 3 x 7 = 21

After (3 x 3) + (3 x 4)

Add their areas: 9 + 12 = 21

What factor was broken apart? 7

AREA



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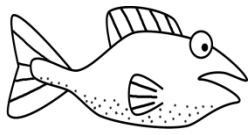
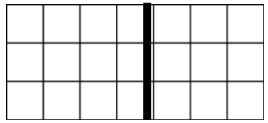


AREA

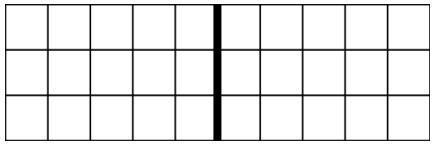
Label the following arrays and then match it to the equations on the canoes..

A.



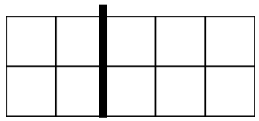
(___ x ___) + (___ x ___)

B.



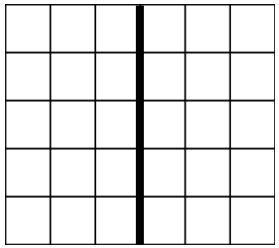
(___ x ___) + (___ x ___)

C.



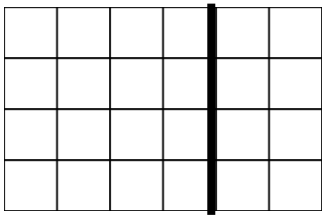
(___ x ___) + (___ x ___)

D.



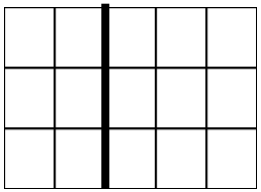
(___ x ___) + (___ x ___)

E.



(___ x ___) + (___ x ___)

F.



(___ x ___) + (___ x ___)

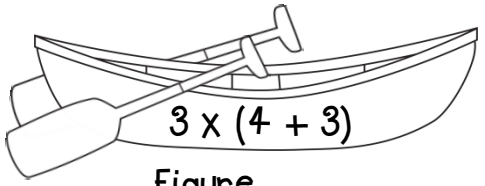


Figure ____

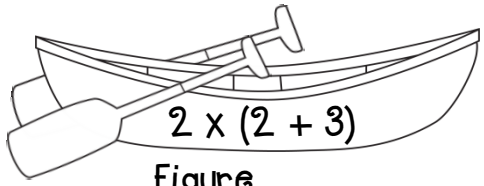


Figure ____

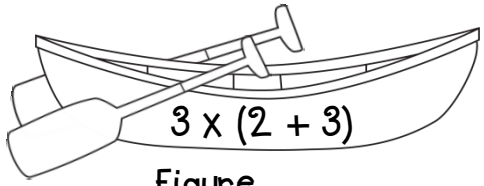


Figure ____

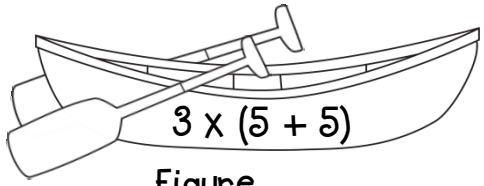


Figure ____

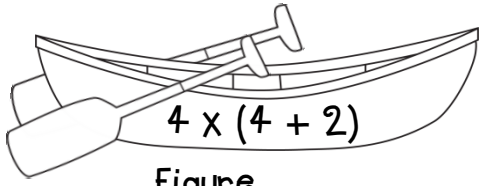


Figure ____

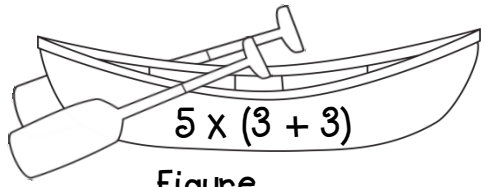


Figure ____

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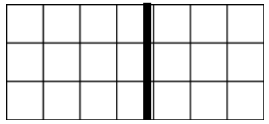
AREA

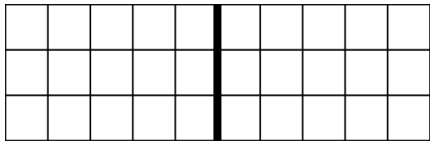
Label the following arrays and then match it to the equations on the canoes..

A.



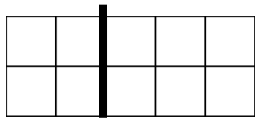
(3 x 4) + (3 x 3)

B.



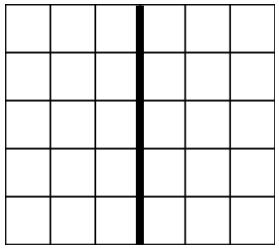
(3 x 5) + (3 x 5)

C.



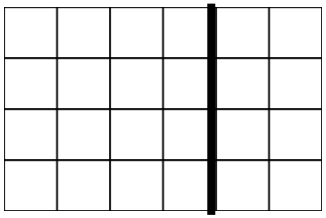
(2 x 2) + (2 x 3)

D.



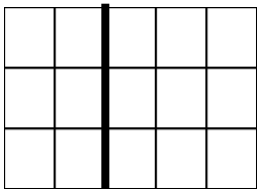
(5 x 3) + (5 x 3)

E.



(4 x 4) + (4 x 2)

F.



(3 x 2) + (3 x 3)

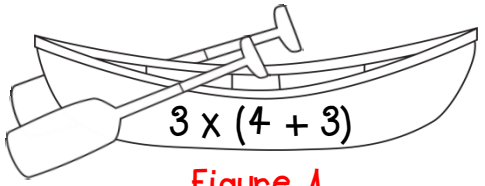


Figure A

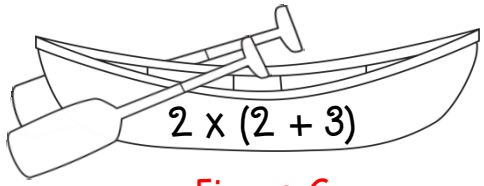


Figure C

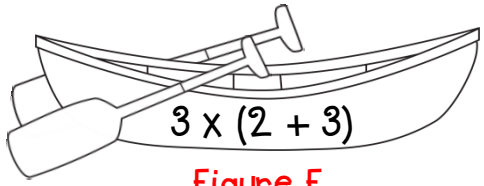


Figure F

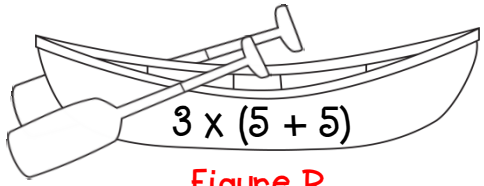


Figure B

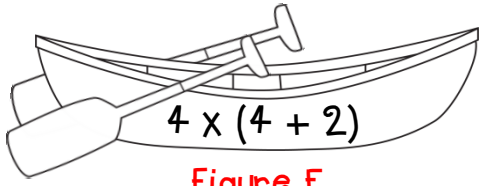


Figure E

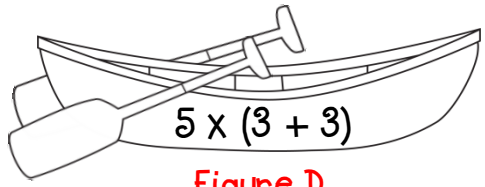


Figure D

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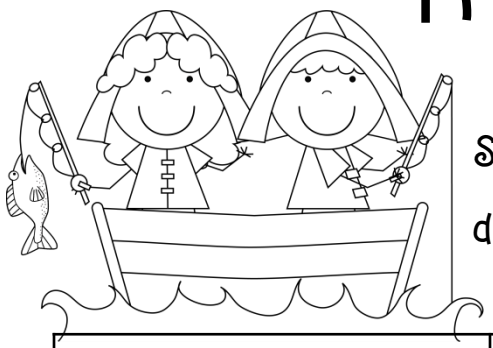
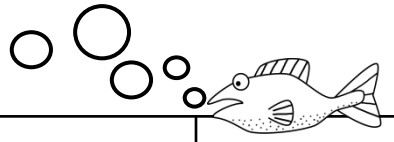
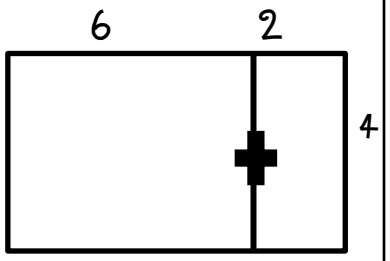
Area & Distributive Property



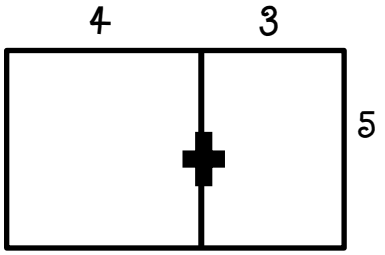
Solve for area. using the distributive property.





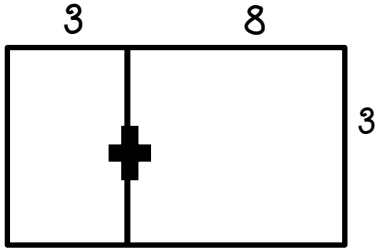
(___ x ___) + (___ x ___)

Area = _____



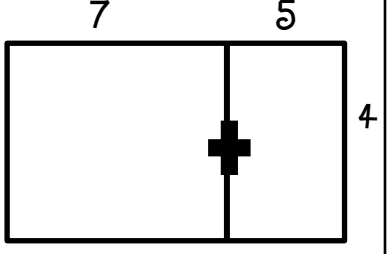
(___ x ___) + (___ x ___)

Area = _____



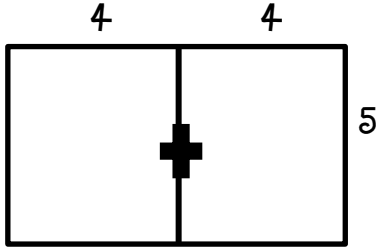
(___ x ___) + (___ x ___)

Area = _____



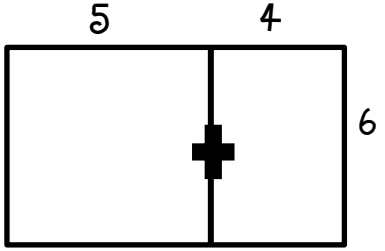
(___ x ___) + (___ x ___)

Area = _____



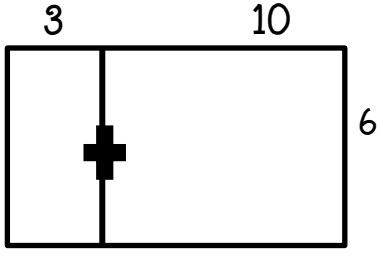
(___ x ___) + (___ x ___)

Area = _____



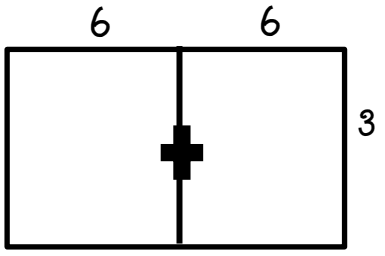
(___ x ___) + (___ x ___)

Area = _____



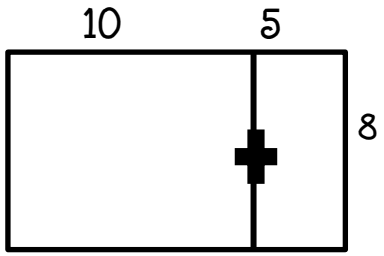
(___ x ___) + (___ x ___)

Area = _____



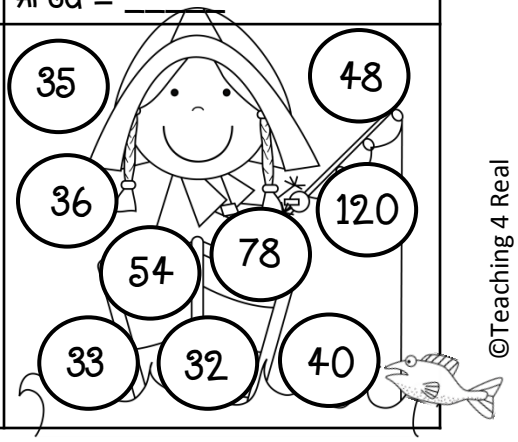
(___ x ___) + (___ x ___)

Area = _____



(___ x ___) + (___ x ___)

Area = _____



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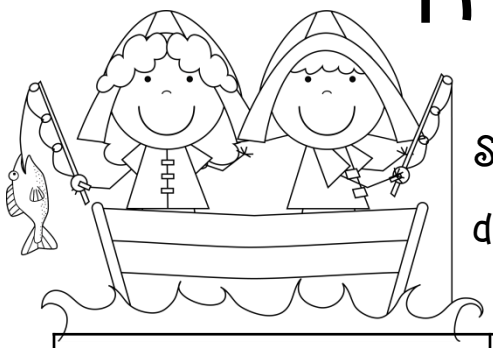
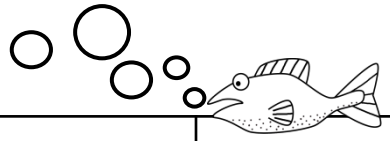
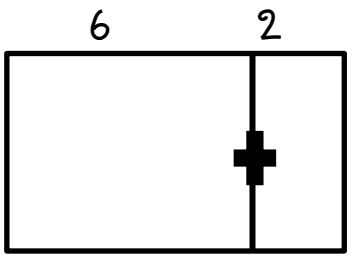
Area & Distributive Property



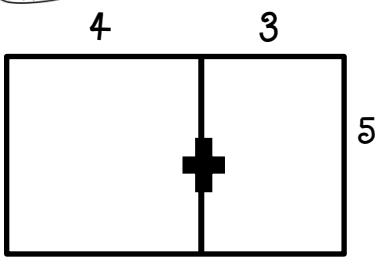
Solve for area. using the distributive property.





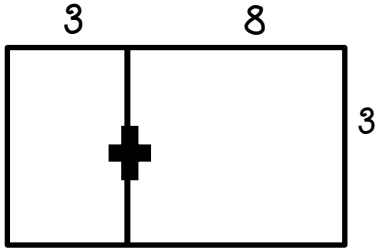
(6 x 4) + (2 x 4)

Area = 32



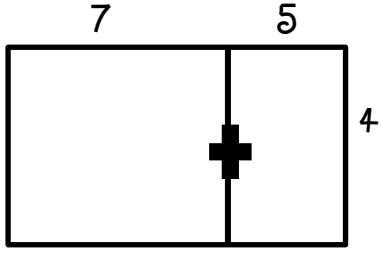
(4 x 5) + (3 x 5)

Area = 35



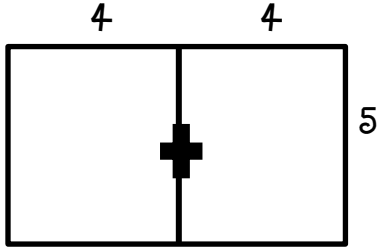
(3 x 3) + (8 x 3)

Area = 33



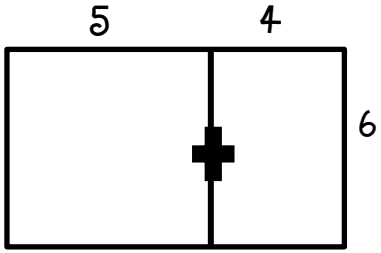
(7 x 4) + (5 x 4)

Area = 48



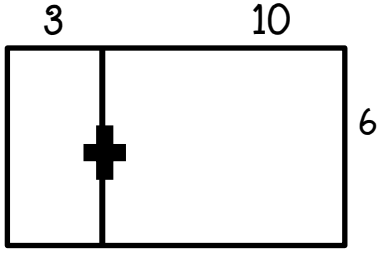
(4 x 5) + (4 x 5)

Area = 40



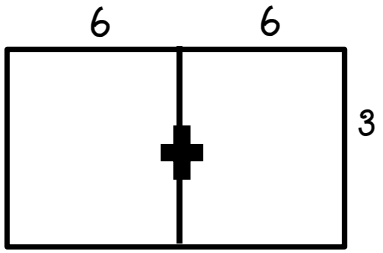
(5 x 6) + (4 x 6)

Area = 54



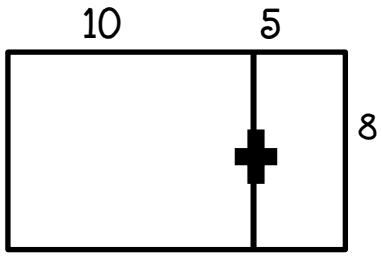
(3 x 6) + (3 x 6)

Area = 78



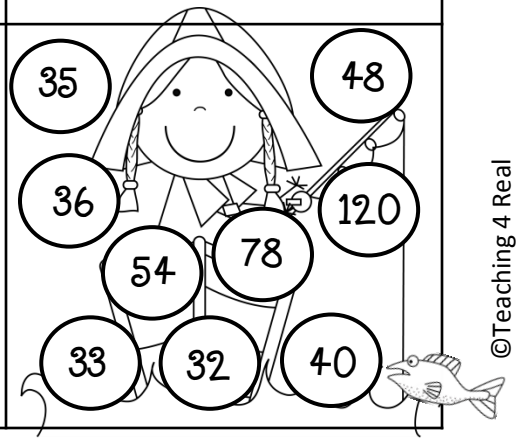
(6 x 3) + (6 x 3)

Area = 36



(10 x 8) + (5 x 8)

Area = 120



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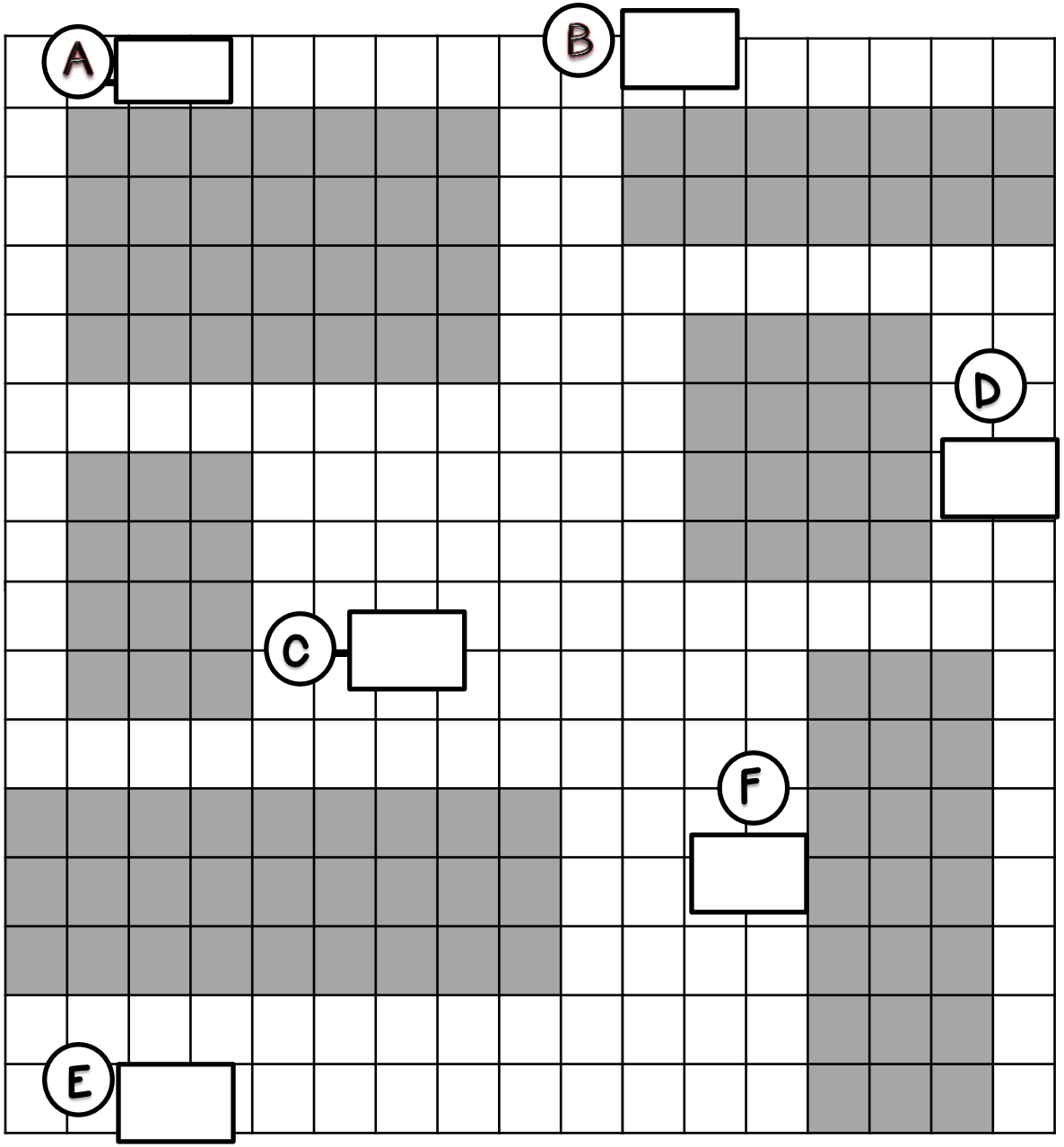
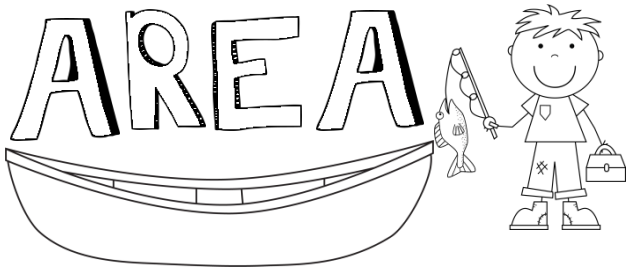


= 1 square unit

AREA



1. How much larger are the areas of figure A & B than C & D?

   _____

2. Write two multiplication equations that could solve the area of figure D.

   _____

3. Write two multiplication equations that could solve the area of figure E.

   _____

4. If figure F's area increased by two more rows, what would the area be?

   _____

5. Which figure could be solved with the equation (3 x 5) + (3 x 4) ?

   _____

☆ How can you solve for the area of figure C with both multiplication and repeated addition? Explain.

_____

_____

_____

_____

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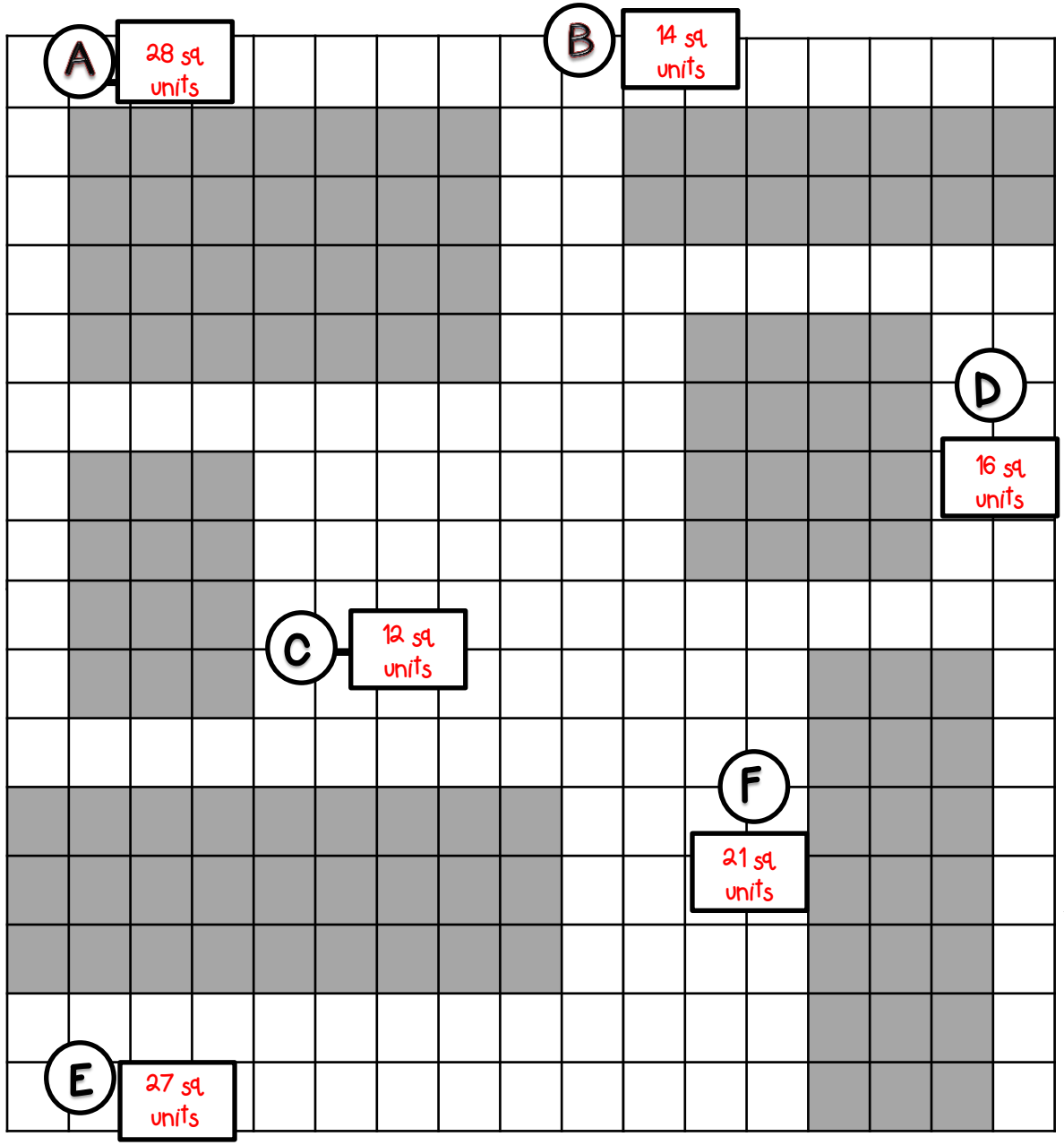

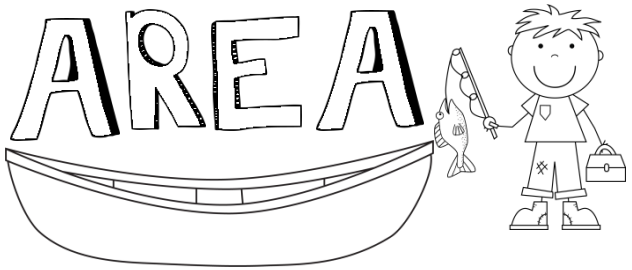

1. How much larger are the areas of figure A & B than C & D?

   14 square units

2. Write two multiplication equations that could solve the area of figure D.

   Answers may vary.

   Ex) (4x 2) & (4 x 2)

3. Write two multiplication equations that could solve the area of figure E.

   Answers may vary.

   (3 x 3) & (3 x 6)

4. If figure F's area increased by two more rows, what would the area be?

   27 square units

5. Which figure could be solved with the equation (3 x 5) + (3 x 4) ?

   Figure E

☆ How can you solve for the area of figure C with both multiplication and repeated addition? Explain.

You can count the number of rows and columns and multiply like 4 x 3 = 12. There are 4 rows of 3 units each so you can add 3+3+3+3 = 12 square units.

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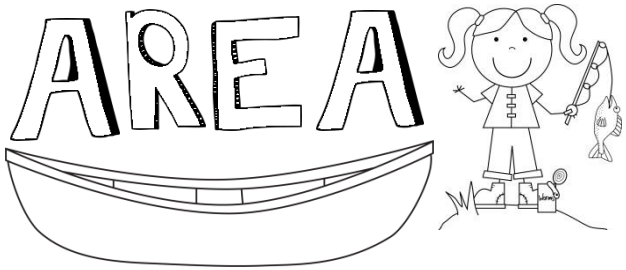

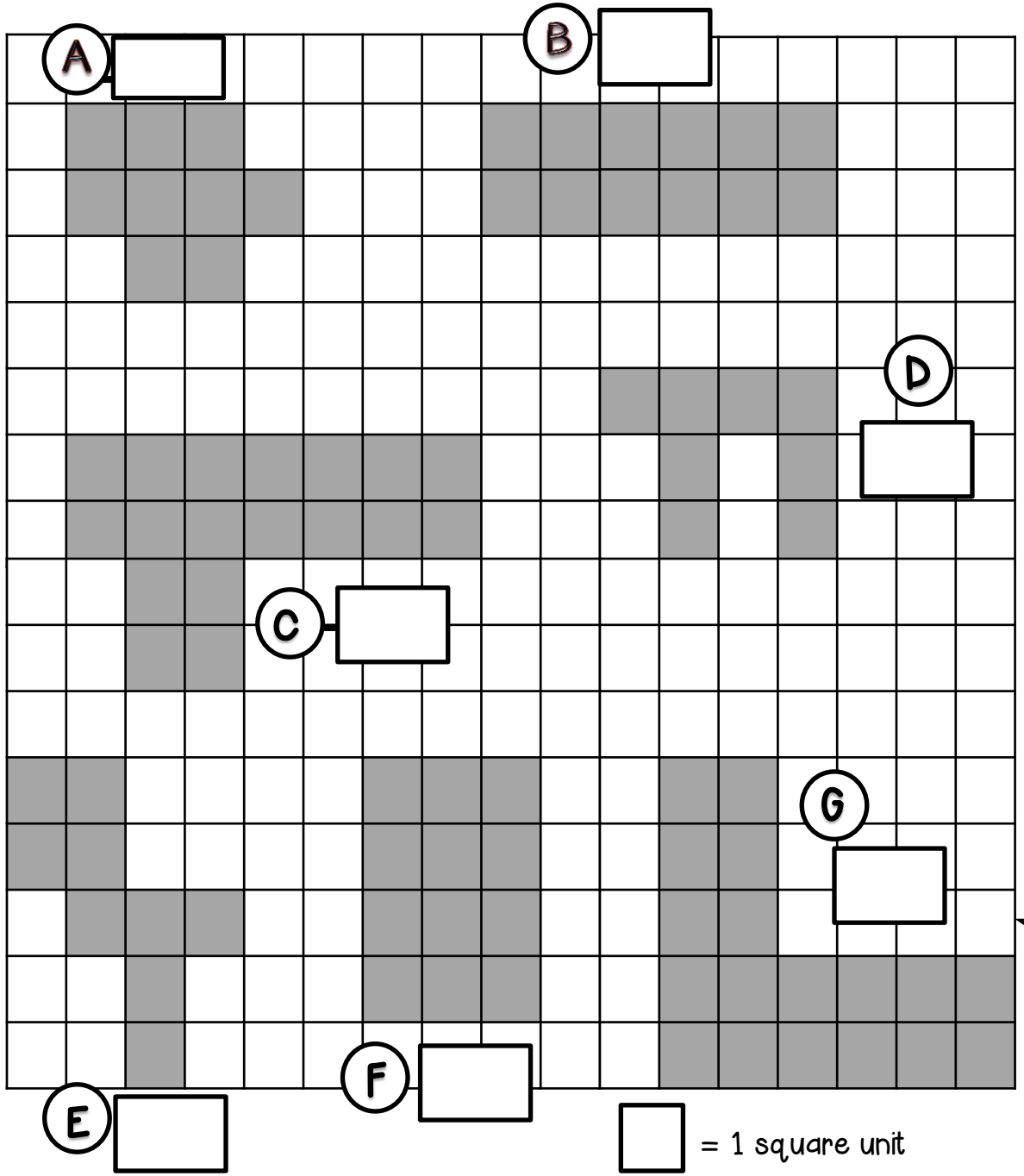

1. What is the area of figure A?
   _____

2. What is the total area of figure C & G? _____

3. How much larger is figure F than figure D? _____

4. Which two figures have the same area but different perimeters?
   _____

5. Which figure could be solved with the equation (2 x 7) + (2 x 2) ?
   _____

6. Name two equations that could help you solve the area of figure G.
   _____

☆ Could figure A be solved with this equation? (3 x 4) – 3? Yes or No? Explain_____
_____
_____
_____
_____

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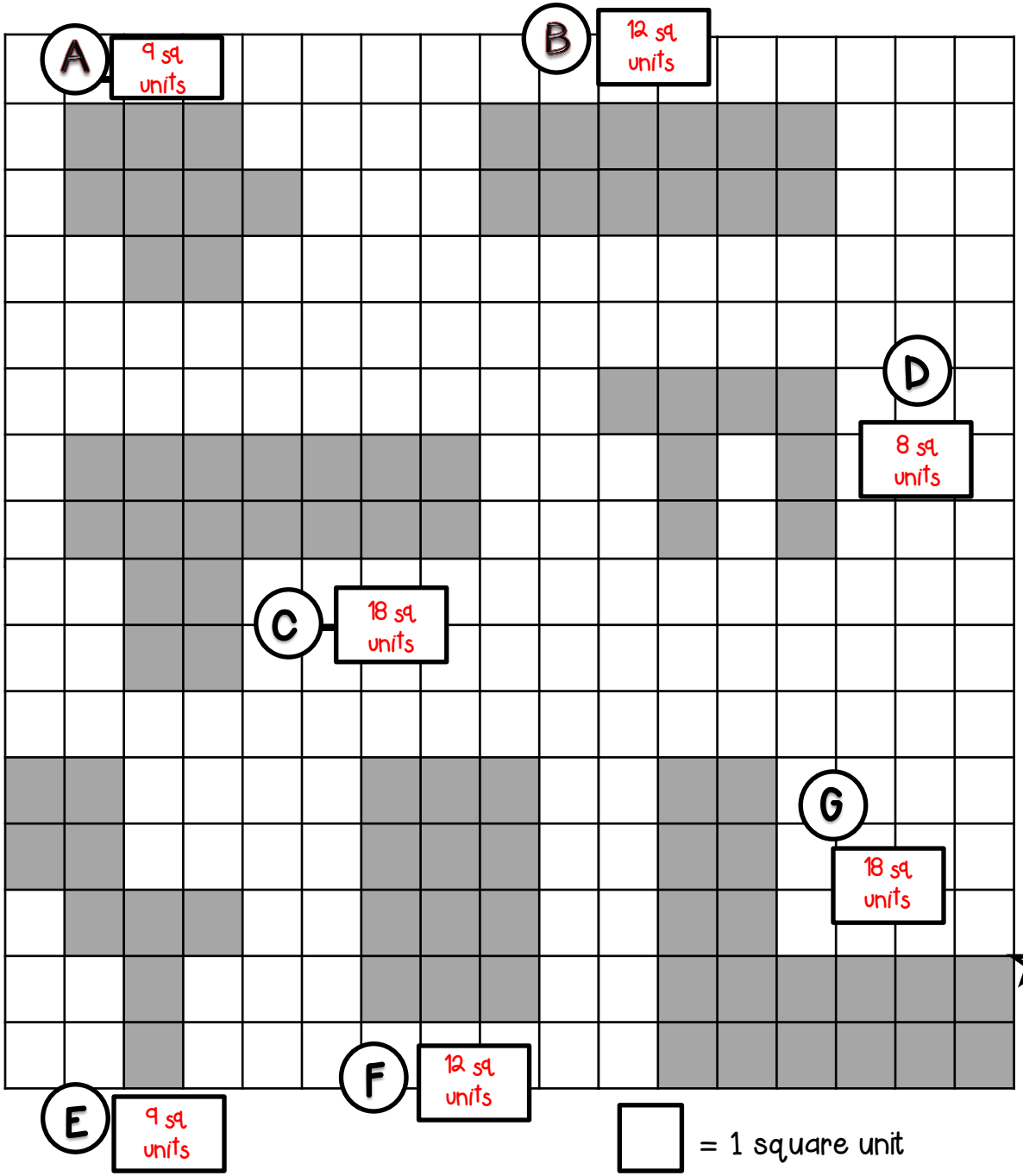

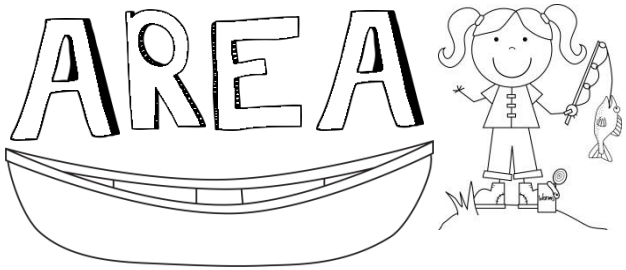

1. What is the area of figure A?
   9 square units

2. What is the total area of figure C & G? 36 square units

3. How much larger is figure F than figure D? 20 square units

4. Which two figures have the same area but different perimeters?
   Figures A & E or B & F

1. Which figure could be solved with the equation (2 x 7) + (2 x 2) ?
   Figure C

1. Name two equations that could help you solve the area of figure G. Answers may vary. Possibilities may include (3 x 2) & (2 x 6)

☆ Could figure A be solved with this equation? (3 x 4) – 3? Yes or No? Explain.
Yes, because if you draw a rectangle using the gray squares and the white squares you could use a multiplication problem of 3 x 4. You would then have to subtract the 3 white squares to get the area.

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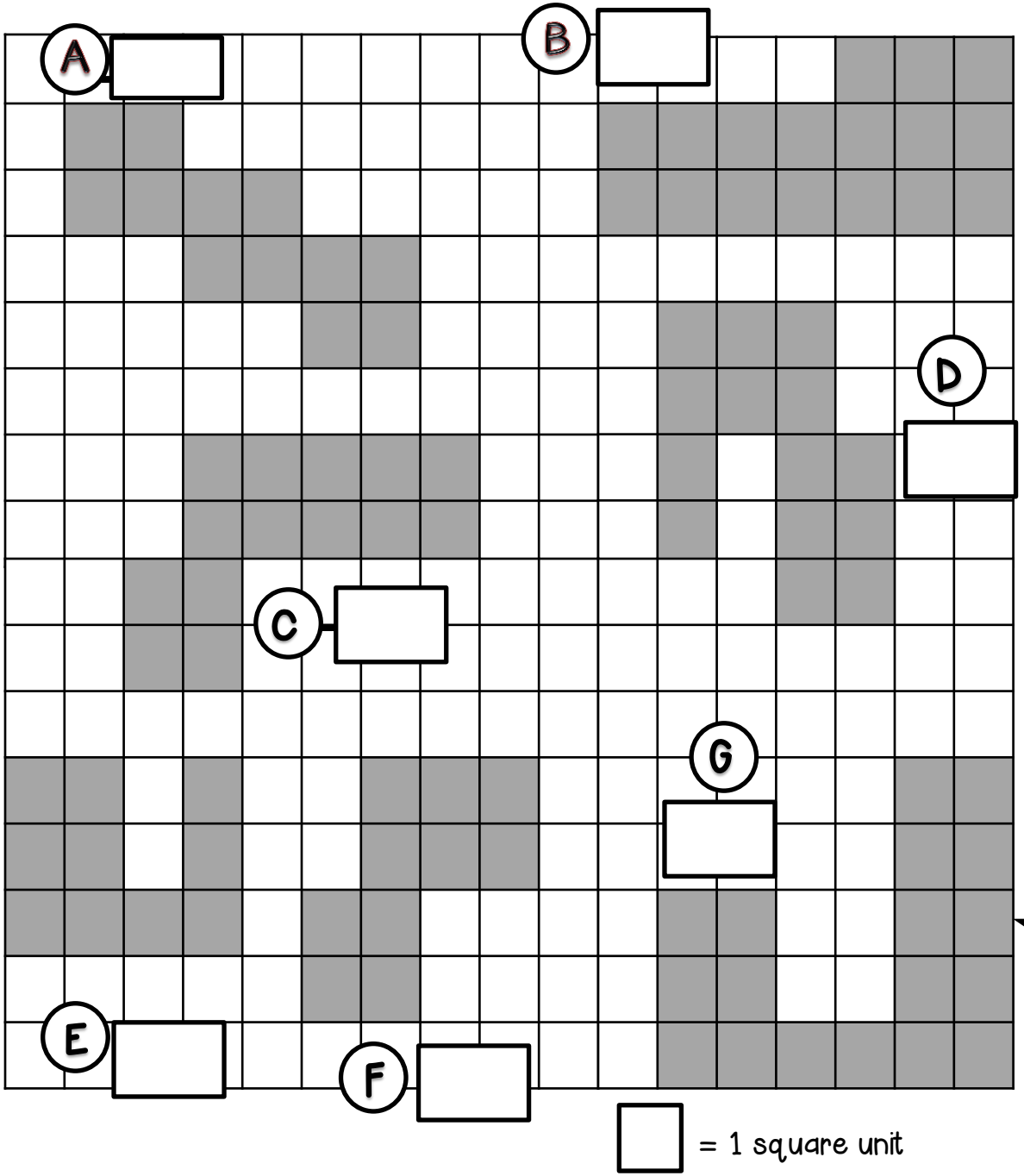

1. What is the area of figure C?
   _____

2. What is the total area of figure G & D? _____

3. How much larger is the area of figure B than figure F? _____

4. Which two figures have the same area but different perimeters?
   _____

5. Which figure could be solved with the equation (3 x 2) + (5 x 2) + 2 = ?
   _____

6. Name 2 equations that could help you solve the area of figure B.
   _____

☆ Could figure E be solved with this equation? 3 x 4 Yes or No?
Explain_____
_____
_____
_____
_____

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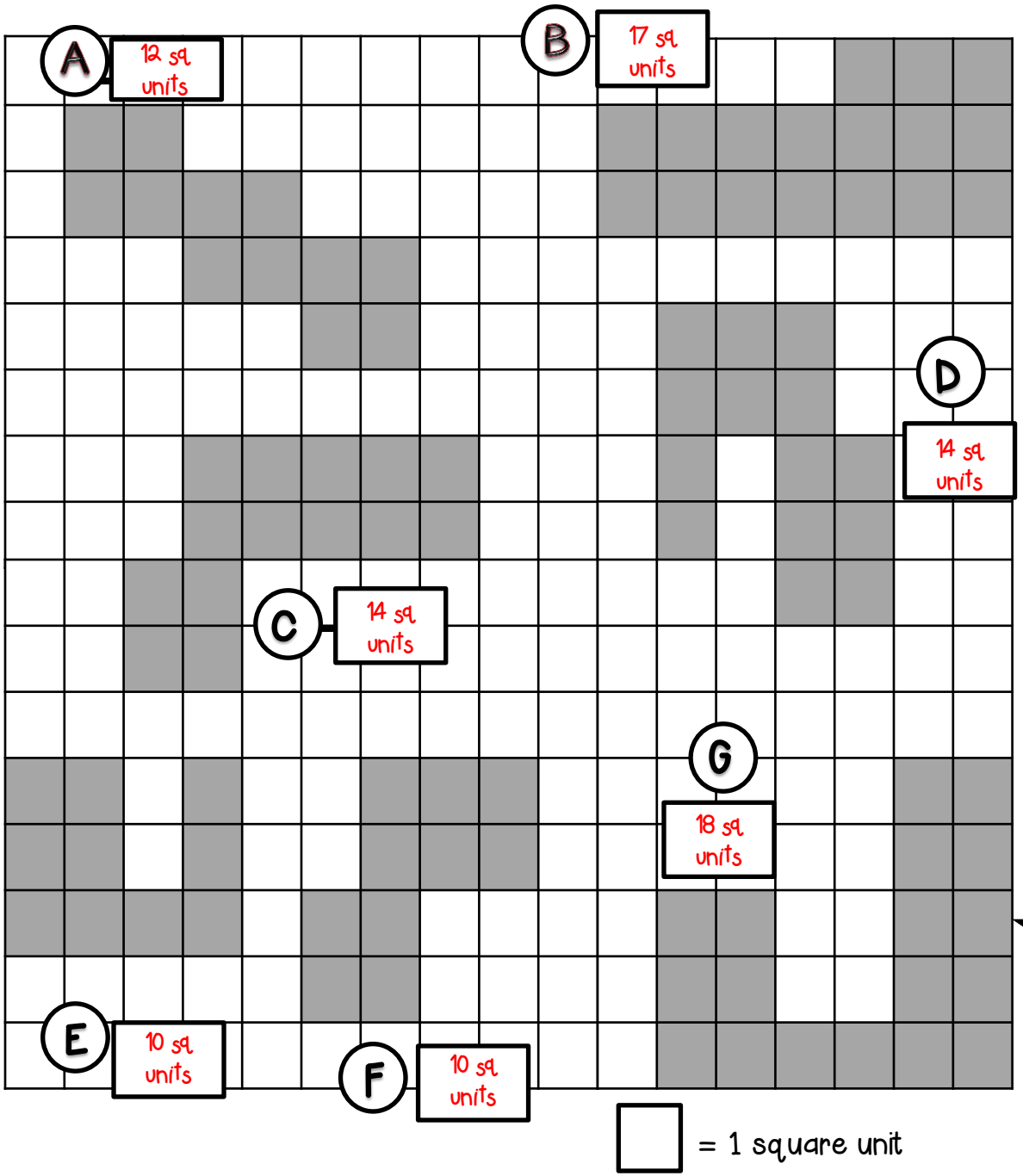

1. What is the area of figure C?
   14 square units

2. What is the total area of figure G & D? 32 square units

3. How much larger is the are of figure B than figure F? 7 square units

4. Which two figures have the same area but different perimeters?
   Figures C & D

5. Which figure could be solved with the equation (3 x 2) + (5 x 2) + 2 = ?
   Figure G

6. Name 2 equations that could help you solve the area of figure B
   Possibility is (2 x 4) & (3 x 3)
   Answers will vary

☆ Could figure E be solved with <u>ONLY</u> this equation? 3 x 4 Yes or No? Explain.
No, because 3 x 4 assumes that all of the unit squares are being used. However 2 units squares are not used.

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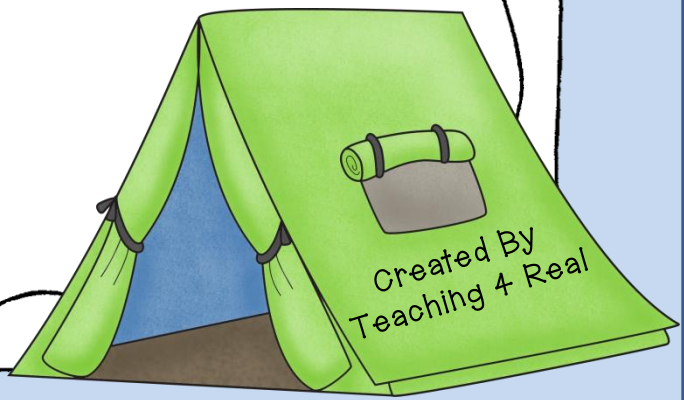
Scoot Game



A

9 in

4 in

What is the area of the rectangle?

C

= 1 square unit

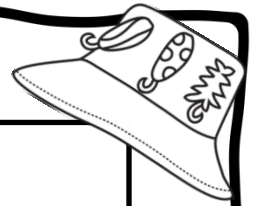
What is the area of the rectangle?

B

What is the area of the rectangle?

= 1 square unit

D



10 in

4 in

What is the area of the rectangle?

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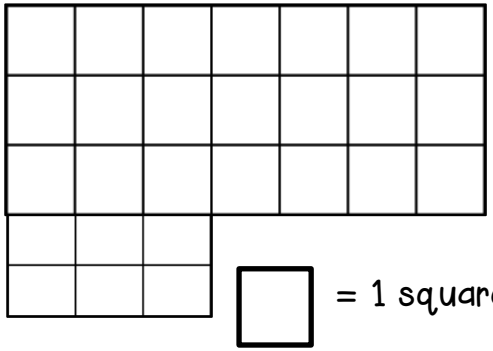
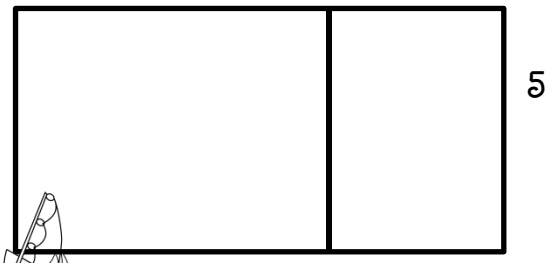
E

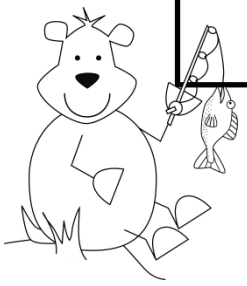


= 1 square unit

What is the area of the rectangle?

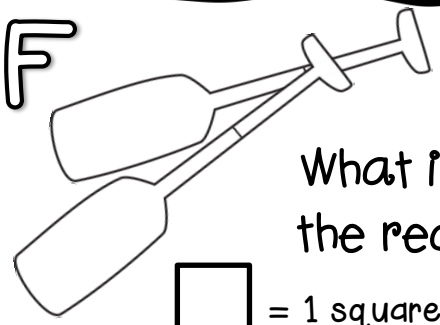
G





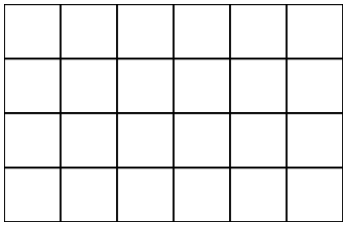
What is the area of the rectangle?

F

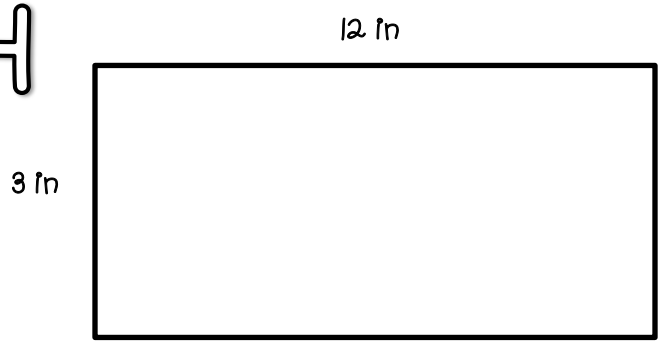


What is the area of the rectangle?

= 1 square unit



H



What is the area of the rectangle?

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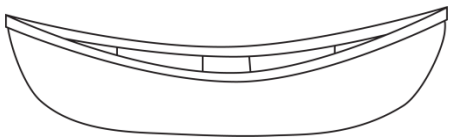
I

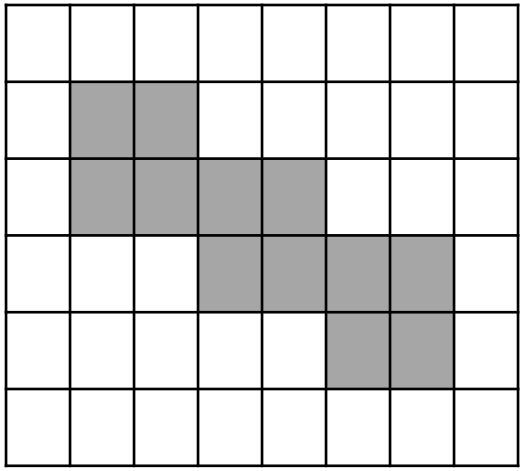
11 in

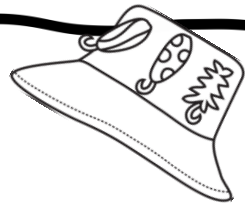
4 in

What is the area of the rectangle?



K

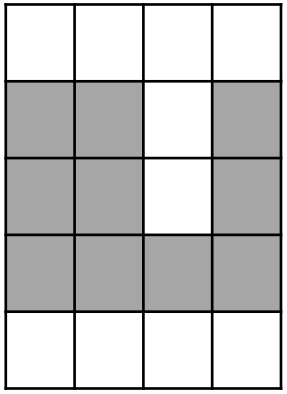




What is the area of the shaded space?

= 1 square unit

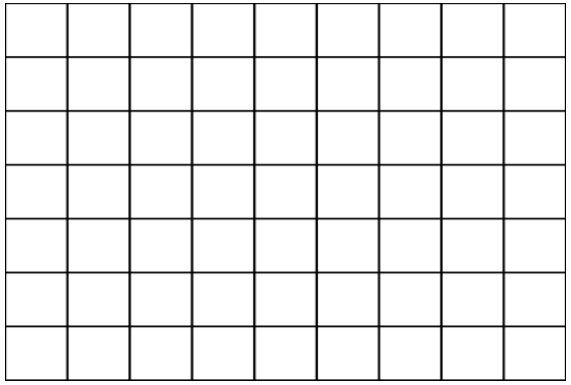
J

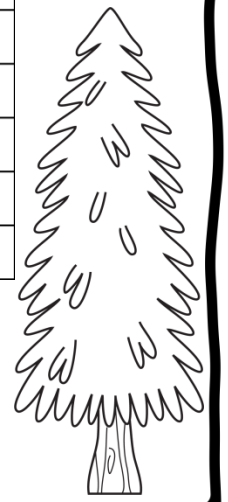


What is the area of the shaded space?

= 1 square unit

L





What is the area of the rectangle?

= 1 square unit

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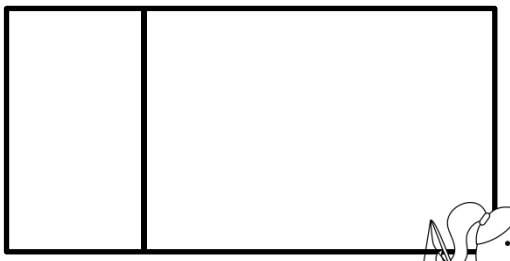
M

7 in

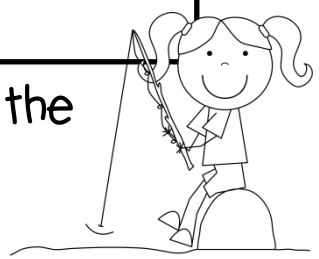
9 in

What is the area of the rectangle?

O

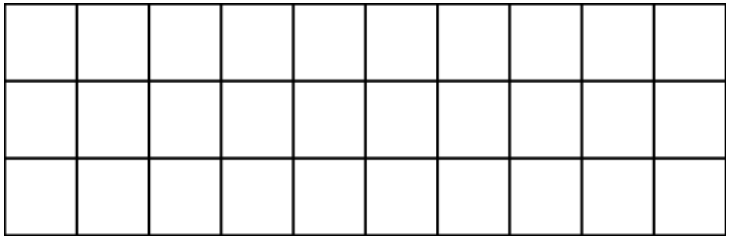


What is the area of the rectangle?

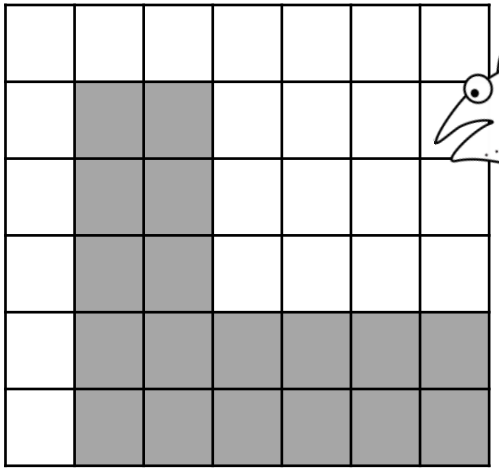


N

What is the area of the rectangle?



= 1 square unit



What is the area of the shaded space?

= 1 square unit

P

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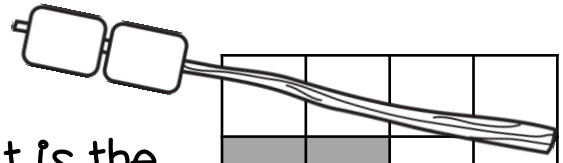
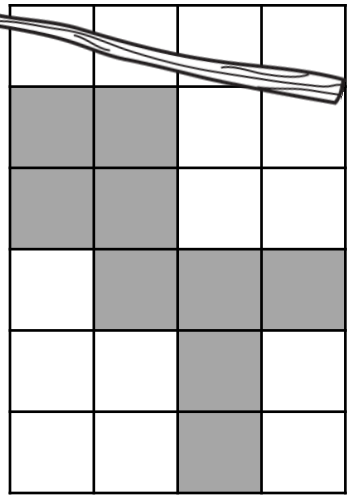
Q



What is the area of the shaded space?

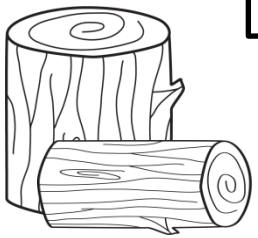


= 1 square unit

S

10 in

10 in



What is the area of the rectangle?

R

What is the area of the rectangle?

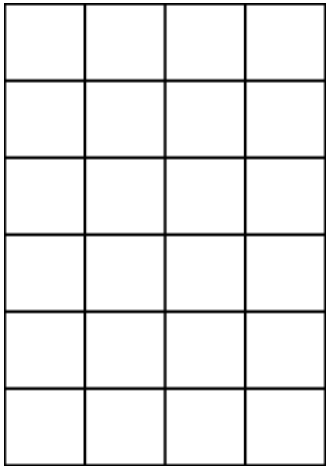
3

6

5

T

What is the area of the rectangle?



= 1 square unit

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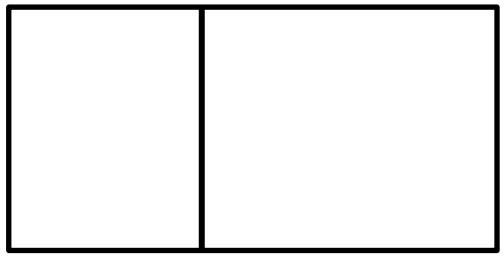
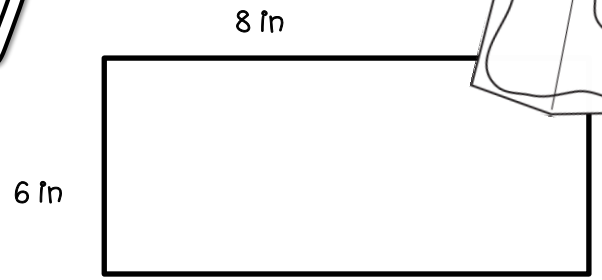
U



What is the area of the rectangle?

W

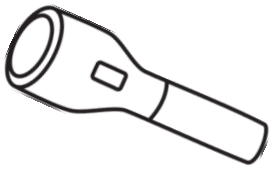


What is the area of the rectangle?

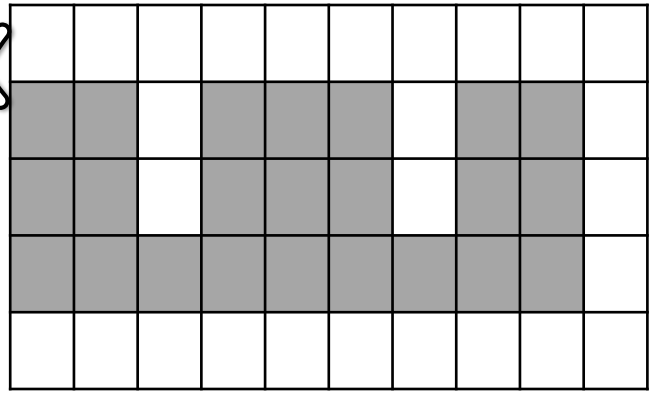
V

What is the area of the rectangle?

= 1 square unit



X



What is the area of the shaded part?

= 1 square unit

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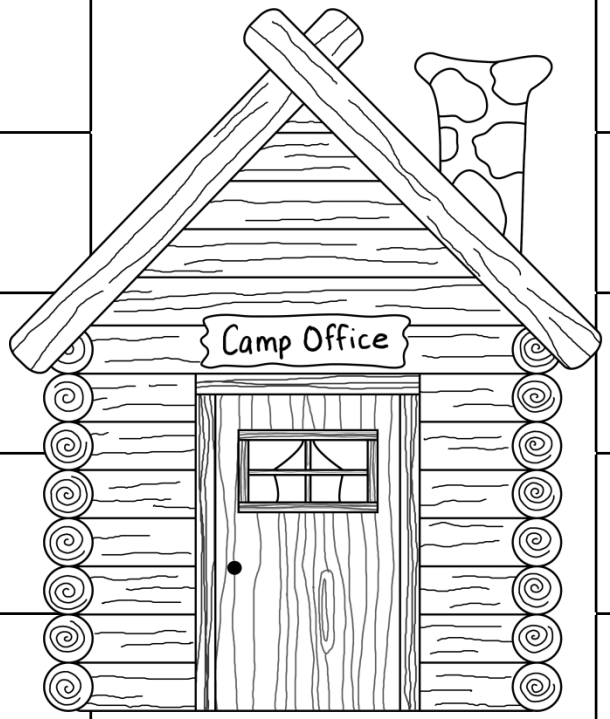
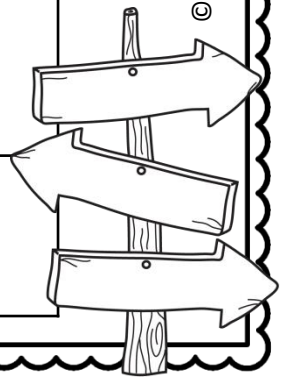
Area Scoot Recording Sheet

Card	Card
a.	g.
b.	h.
c.	i.
d.	j.
e.	k.
F	l.



Card	Card
m.	s.
n.	t.
o.	u
p.	v.
q.	w.
r.	x.



Name_____

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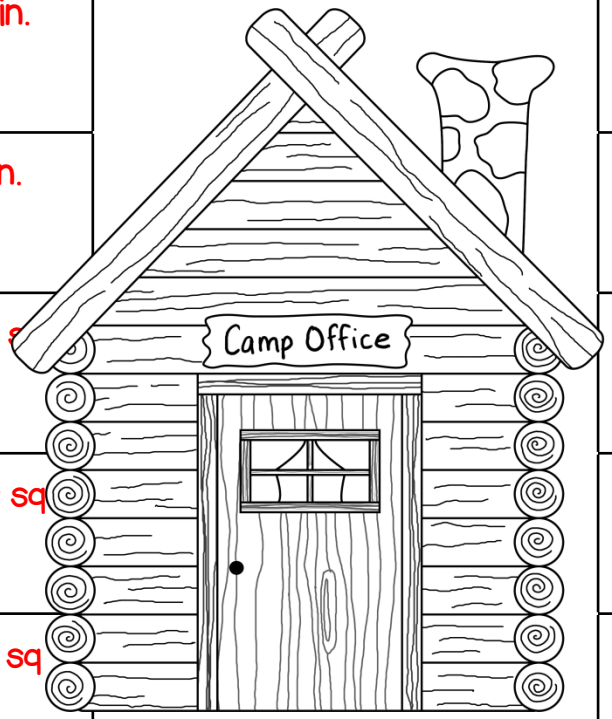
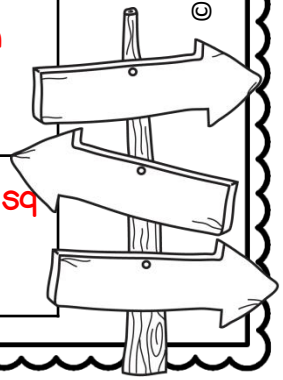
Area Scoot Recording Sheet

Card	Card
a. 35 sq. in.	g. 50
b. 21 units sq	h. 36 sq in.
c. 30 units sq	i. 44 sq in.
d. 40 sq. in.	j. 10 units s
e. 27 units sq	k. 12 units sq
f. 24 units sq	l. 63 units sq



Card	Card
m. 63 sq in.	s. 100 sq. in.
n. 30 units sq	t. 24 units sq
o. 48	u. 42
p. 18 units sq	v. 14 units sq
q. 9 units sq	w. 43 sq in
r. 45 units sq	x. 23 units sq

Name_____



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