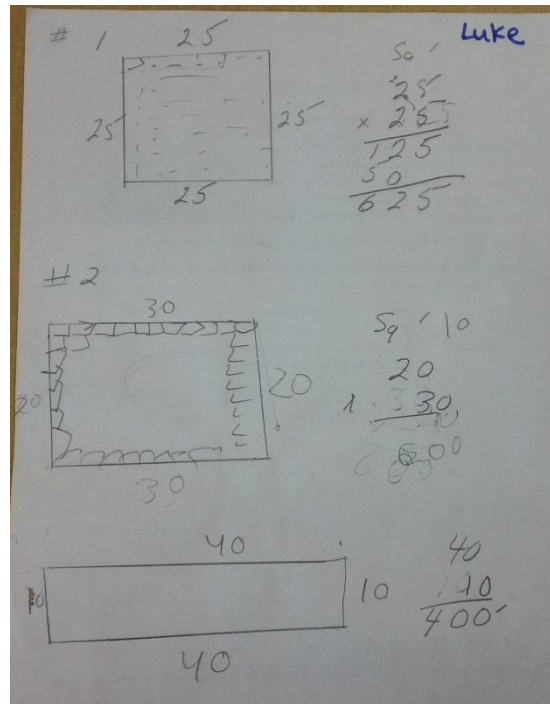
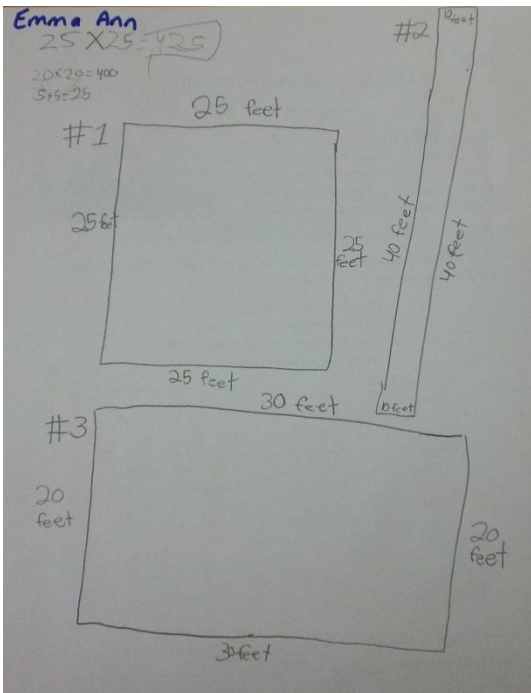
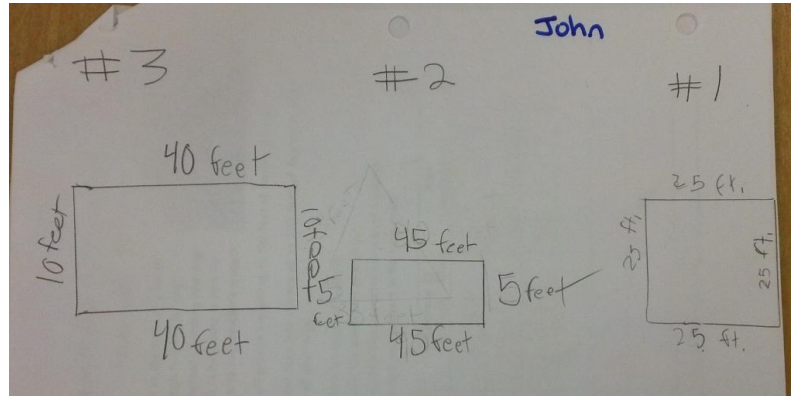
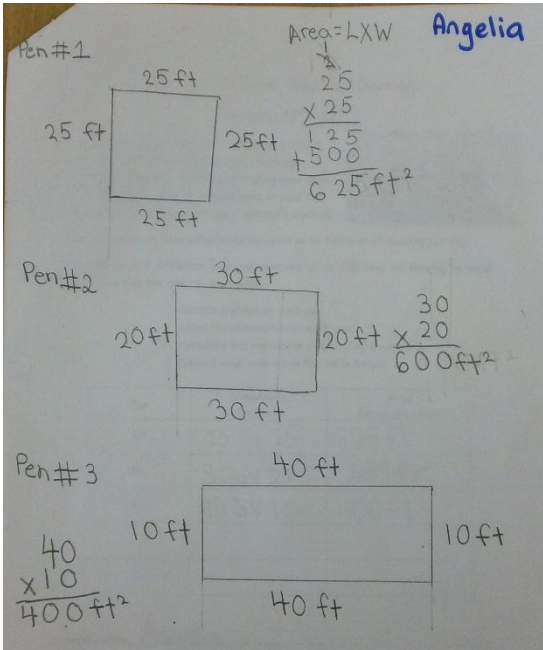
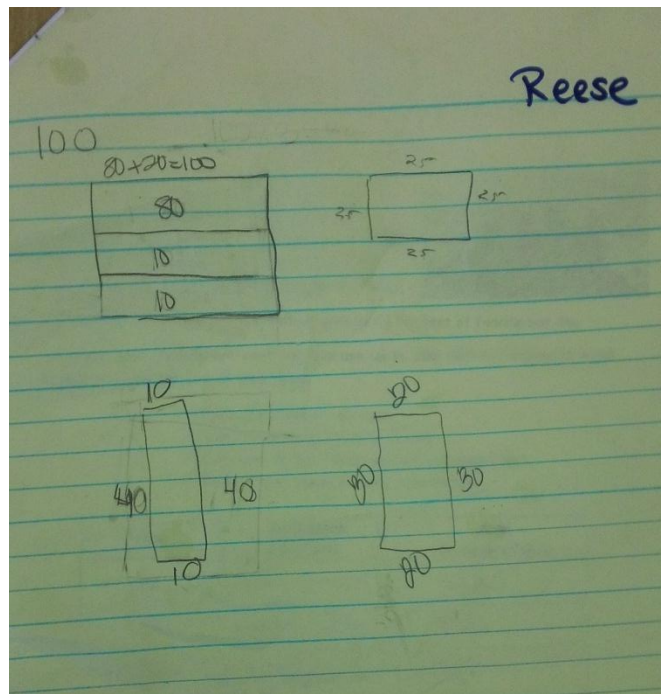
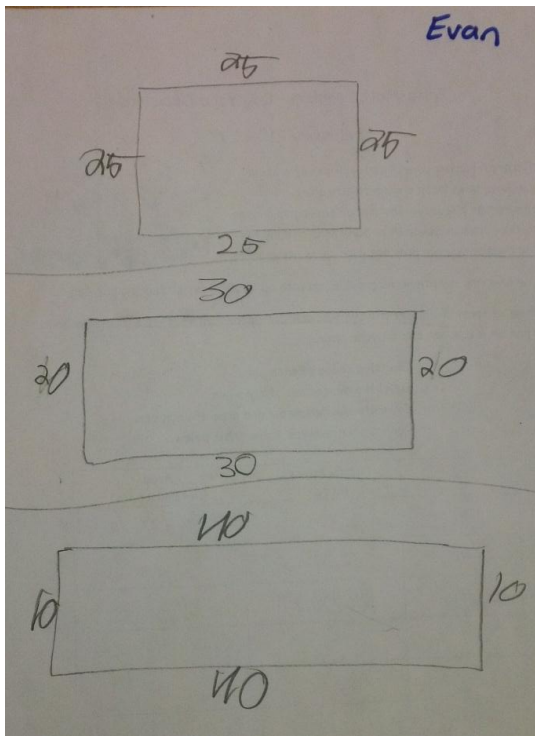
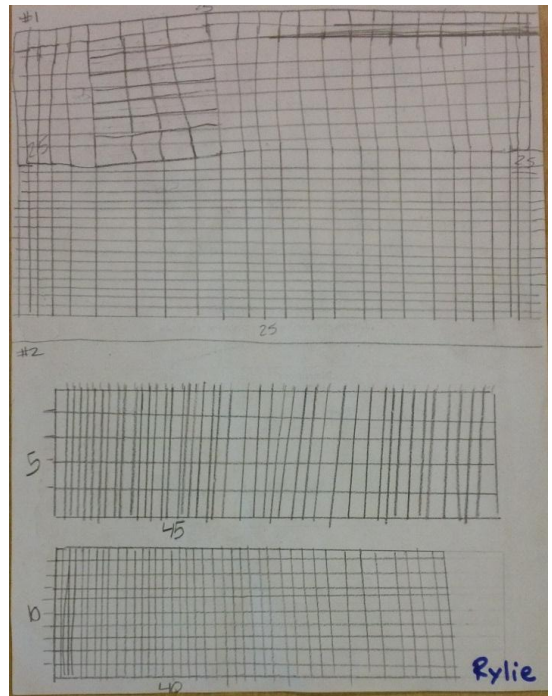
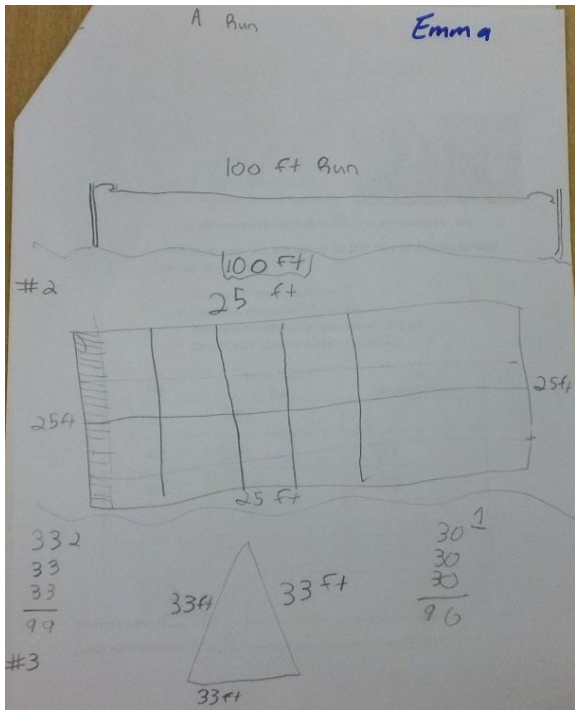


Solutions for Dog Yard Decisions

This problem asked you to show different ways to use up to 100 feet of fencing to build a pen or a run for one of the dogs.





Mary

Pen #1

25 ft. (top side)
25 ft. (left side)
25 ft. (bottom side)

$P = 100 \text{ ft}$
 $A = 25 \text{ ft}^2$

Pen #2

16 ft. (top side)
16 ft. (left side)
16 ft. (right side)
16 ft. (bottom side)

$P = 64 \text{ ft}$
 $A = L \times W = 16 \times 16 = 256$

Pen #3

21.5 ft. (top side)
21.5 ft. (left side)
21.5 ft. (right side)
21.5 ft. (bottom side)

$P = 87 \text{ ft}$
 $A = 462.25 \text{ ft}^2$

Handwritten calculations:
 $5 \times 5 = 25$
 $20 \times 20 = 400$
 $400 + 25 = 425$

$$\begin{array}{r} 28 \\ \times 25 \\ \hline 140 \\ + 560 \\ \hline 700 \end{array}$$

Andrew

①

10 (top)
10 (bottom)
5 (left)
5 (right)

②

20 (top)
20 (right)
20 (bottom)
20 (left)
20 (diagonal)

Pentagon

③

25 (top)
25 (right)
25 (bottom)
25 (left)

Jackson

1 in = 1 ft

100 (top)

10 (top)

50 (bottom)

5 (left)

50 (bottom)

David

10 ft (top)
40 ft (left)
40 ft (right)

25 ft (top)
25 ft (left)
25 ft (right)
25 ft (bottom)

18 ft (top)
2 ft (left)
2 ft (right)
2 ft (bottom)

250 + 150 = 400

$A = B + C$

$F = D + E$

Abigail

25 ft (top)
25 ft (left)
25 ft (right)
25 ft (bottom)


6 ft (top)
6 ft (left)
6 ft (right)
6 ft (bottom)

Pen	Dimensions (in feet)	Area (in square feet)
#1	25 by 25	625
#2	20 by 30	600
#3	15 by 35	525

I think 25 by 25 is best.

Student's name: Joseph

Lucas




$$25 \times 20 = 500$$

$$25 \times 5 = 125$$


$$500 + 125 = 625$$

2



$$10 \times 40 = 400$$

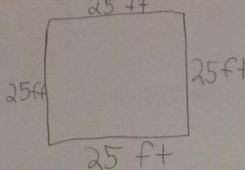
3



$$20 \times 30 = 600$$

Penny

#1



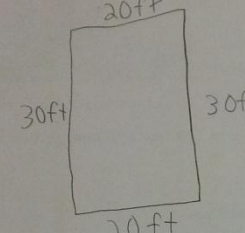
$$25 \times 25 = 625$$

$$20 \times 25 = 500$$

$$5 \times 25 = 125$$

$$\begin{array}{r} 500 \\ + 125 \\ \hline 625 \end{array}$$

#2



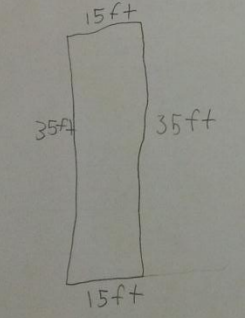
$$20 \times 30 = 600$$

$$20 \times 10 = 200$$

$$20 \times 20 = 400$$

$$\begin{array}{r} 200 \\ + 400 \\ \hline 600 \end{array}$$

#3



$$35 \times 15 =$$

$$30 \times 15 = 450$$

$$5 \times 15 = 75$$

$$\begin{array}{r} 450 \\ + 75 \\ \hline 525 \end{array}$$

Record your answers in the table below.

Kaleigh

Pen	Dimensions (in feet)	Area (in square feet)
#1	25 x 25	625
#2	30 x 20	600
#3	40 x 10	400

Sheehan

$$20 \times 30 = 600 \text{ square feet}$$

$$25 \times 25 = 625$$

$$100 + 100 + 100 + 100 + 200 = 600$$

Area: 600 square feet Area: 625 square feet Area: 600 square feet

Perimeter: 100' Perimeter: 100' Perimeter: 100'

$$20 + 20 + 30 + 30 = 100$$

$$25 + 25 + 25 + 25 = 100$$

$$20 + 20 + 20 + 20 + 20 = 100$$
