**Name:**

# PRACTICE

## GEOMETRY

# Area of Parallelograms

| | |
|---|---|
| 23 ft<br>17 ft | 14 cm  11 cm<br>19 cm |

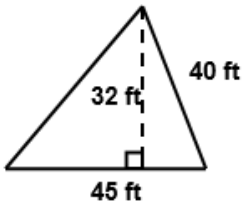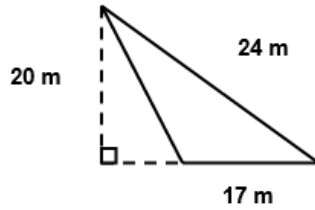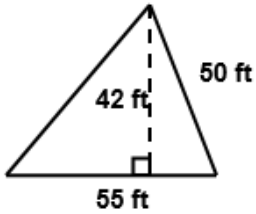| | |
|---|---|
| 16 m  15 m<br>7.4 m | What is the width of a parallelogram with an area of 3,600 square yards and a length of 80 yards? |

Carlos wants to stain his rectangular deck. One gallon of stain will cover about 350 square feet of surface. His deck is 16 feet long and 22 feet wide. If he has only one gallon of stain, does he have enough stain to put one coat on the deck's surface?

# Area of Triangles



50 ft
42 ft
55 ft



24 m
20 m
17 m



40 ft
32 ft
45 ft

What is the height of a triangle with a base of 6 cm and area of 18 cm$^2$?
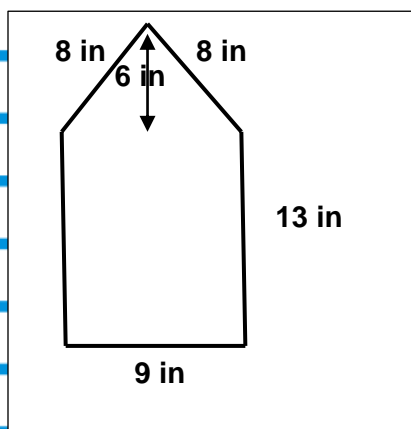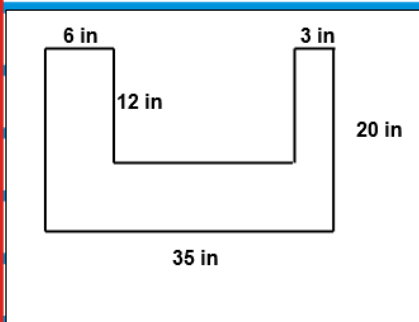
Samantha is painting a seaside mural. The sail on the sailboat will be 5 feet wide and 10 feet tall. If a can of spray paint covers 10 square feet, how many cans will she need?

# Area of Trapezoids



18 yd
16 yd · 8 yd · 16 yd
26 yd



32 yd
14 yd · 18 yd
16 yd



16 yd
12 yd · 7 yd · 12 yd
21 yd
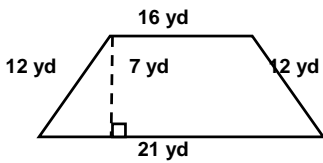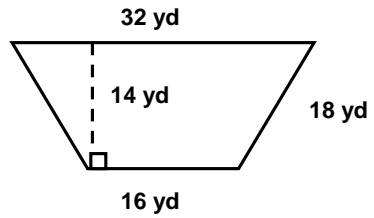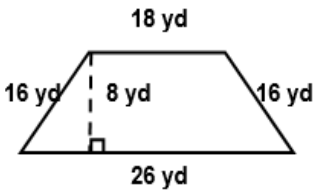
If a trapezoid has an area of 90 square meters and bases of 5 and 10 meters, find the height.

# Area of Composite Figures
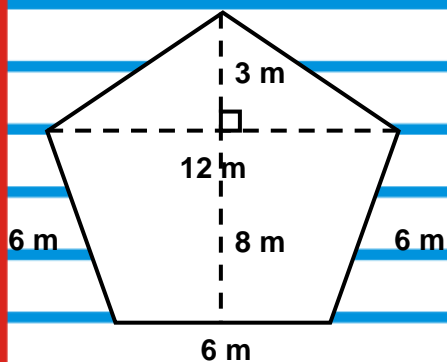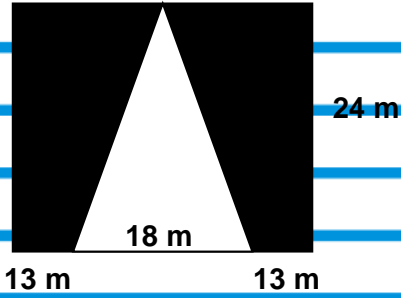


3 m

12 m

8 m

6 m          6 m

6 m



6 in          3 in

12 in

20 in

35 in



8 in          8 in

6 in

13 in

9 in

# Area of Shaded Regions

**24 m**
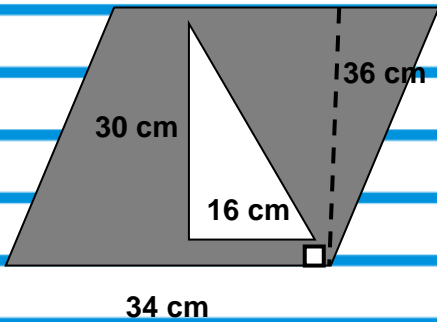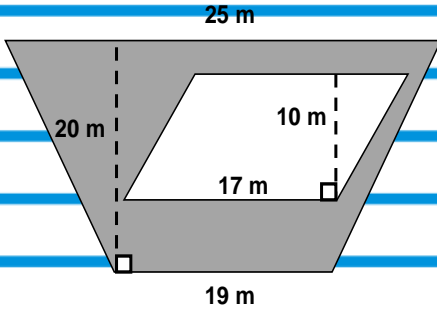
**18 m**

**13 m**　　　　**13 m**

**25 m**

**20 m**

**10 m**

**17 m**

**19 m**

**36 cm**

**30 cm**

**16 cm**

**34 cm**

Find the Surface Area



**22 in**

**26 in**

Find the Surface Area



**5 m**

**15 m**

**45 m**

Find the Surface Area



**4 in**

**8 in**

**6 in**
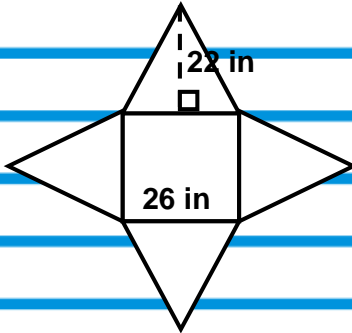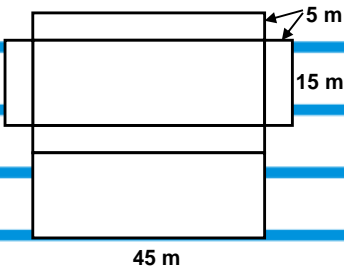
## Surface Area Word Problems

A cracker company wants to create a new eco-friendly design for their package which uses the least amount of cardboard. Which takes less cardboard to make: 2 boxes that are 5x8x9 inches or 1 box of 12x11x7 inches?

Casey wants to paint the surface of a wooden pyramid he built. Use the net below to calculate how many cans of paint Joseph will need to buy in order to paint his pyramid if a can covers 100 cm$^2$.

7 cm

7 cm

8 cm

15 cm

# Volume



**2.5cm**

**2cm**

**2¼cm**



**1 1/3cm**

**2/3 cm**

**4 cm**
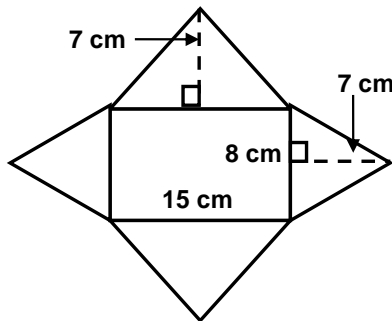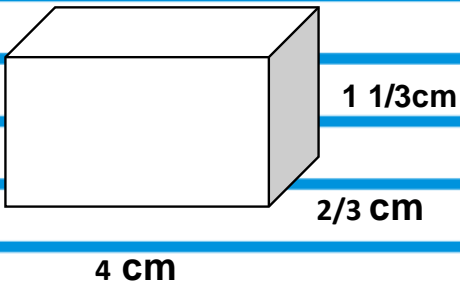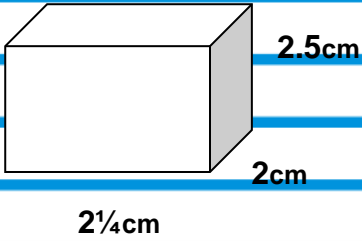
Each small cube has a length, width and height of ½ unit.

# Volume & Surface Area Performance Task

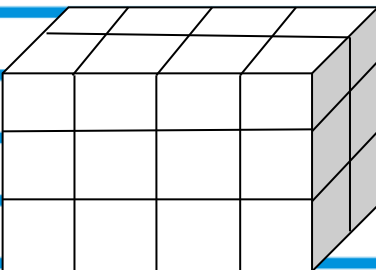A cereal company is selecting packaging for their new product Fruity Os. Both packages are rectangular prisms. They need the package to hold at least 140 in³ of cereal, and use the least amount of packaging material. Option A is 12 in high, 6 in long, and 2.5 in wide. Option B is 8 inches high, 6 inches long, and 3 inches wide.

How much cereal will package A hold?

How much cereal will package B hold?

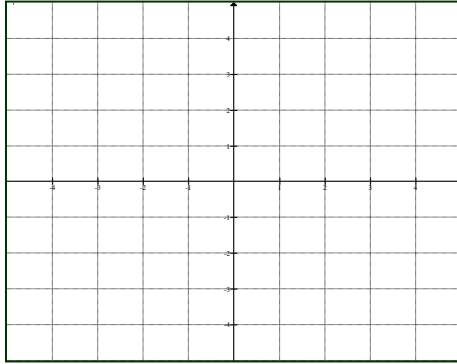How much cardboard will package A use?

How much cardboard will package B require?

Which package should the company choose? Why?
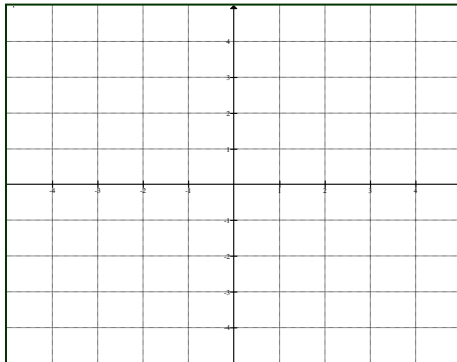
# Polygons in the Coordinate Plane

Plot the following points and connect them in the order given. What would be the coordinate of a fourth point that would form a parallelogram?

R (3,-2) S (3,3) T (0,5)

Plot the following points in the order given.  What is the area of the shape formed?
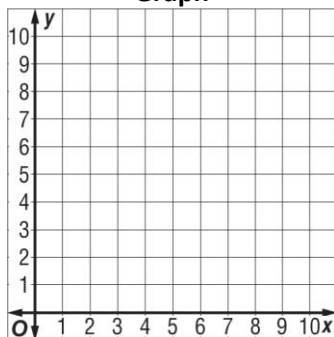
D (-3,-1) E (-5,-5) F (-1,-5)
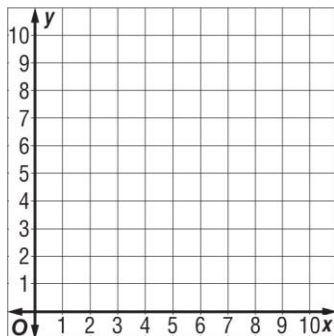
# Blast from the Past

| Equation | Table | Graph |
|---|---|---|

**Equation**     **Table**                    **Graph**

y = 2x

| x | y |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |

y = 2x + 1

| x | y |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |

y = x + 6

| x | y |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
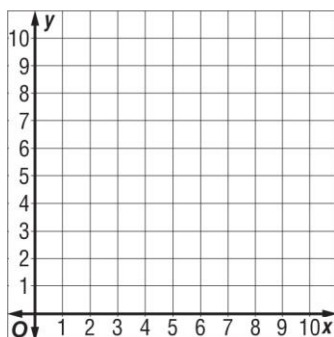
**Name:**
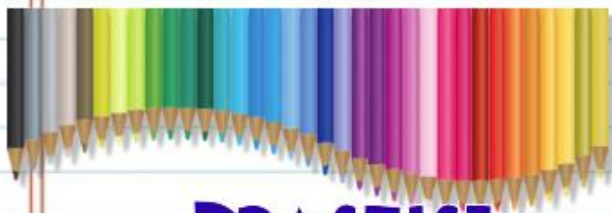
# PRACTICE

## GEOMETRY
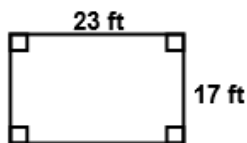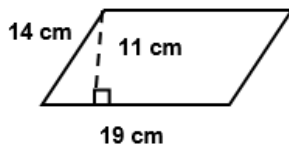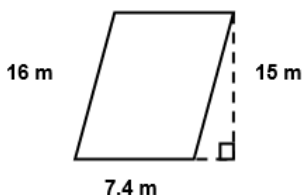
# Area of Parallelograms

| | |
|---|---|
| 23 ft<br>17 ft | 14 cm   11 cm<br>19 cm |

**391 ft²**                       **209 cm²**

| | |
|---|---|
| 16 m    15 m<br>7.4 m | What is the width of a parallelogram with an area of 3,600 square yards and a length of 80 yards? |

**111 m²**                       **45 yds**

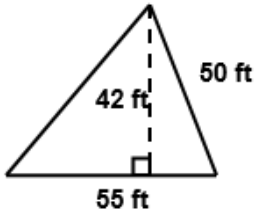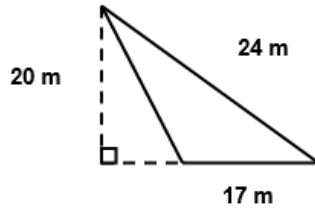Carlos wants to stain his rectangular deck.  One gallon of stain will cover about 350 square feet of surface.  His deck is 16 feet long and 22 feet wide.  If he has only one gallon of stain, does he have enough stain to put one coat on the deck's surface?
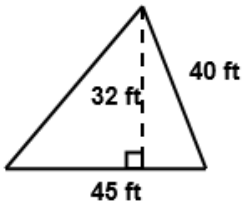
**No, he will have an area of**

**two square feet uncovered.**

# Area of Triangles



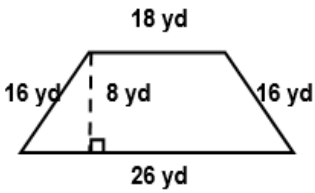**1,155 ft²**                                    **170 m²**



What is the height of a triangle with a base of 6 cm and area of 18 cm²?

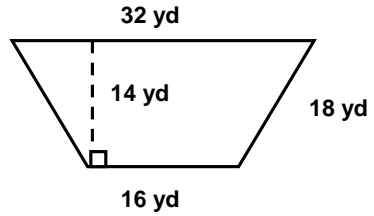**720 ft²**                                    **6 cm**

Samantha is painting a seaside mural.  The sail on the sailboat will be 5 feet wide and 10 feet tall.  If a can of spray paint covers 10 square feet, how many cans will she need?

**3 cans**

# Area of Trapezoids

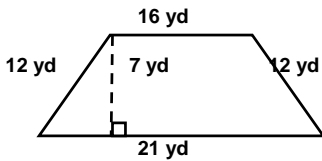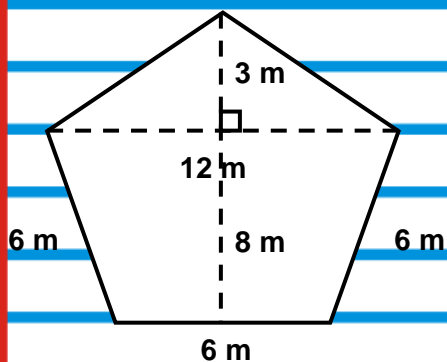

18 yd

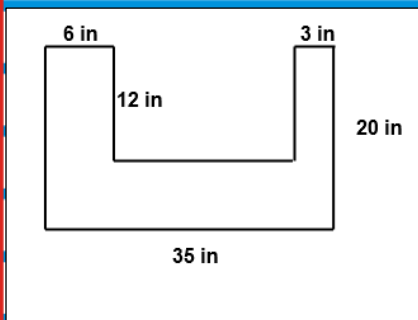16 yd  8 yd  16 yd

26 yd

32 yd

14 yd

18 yd

16 yd

**176 yd²**

**336 yd²**

16 yd

12 yd  7 yd  12 yd

21 yd

If a trapezoid has an area of 90 square meters and bases of 5 and 10 meters, find the height.

**129.5 yd²**

**12 meters**

# Area of Composite Figures

**3 m**

**12 m**

**6 m**     **8 m**     **6 m**

**90 m²**

**6 m**

---

**6 in**     **3 in**

**12 in**

**20 in**

**35 in**

**372 in²**

---

**8 in**   **8 in**

**6 in**

**13 in**

**144 in²**

**9 in**

# Area of Shaded Regions



24 m

**840 m²**

18 m

13 m       13 m

25 m

20 m

10 m

17 m

**270 m²**

19 m

36 cm

30 cm

**984 cm²**

16 cm

34 cm
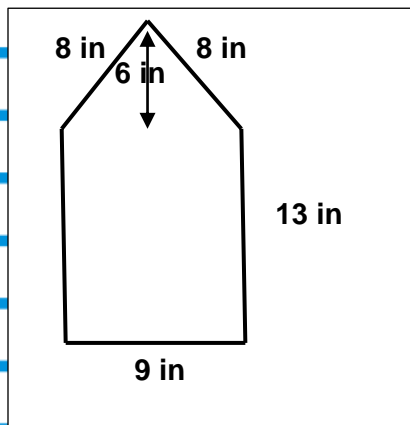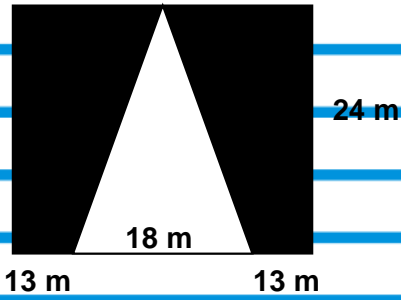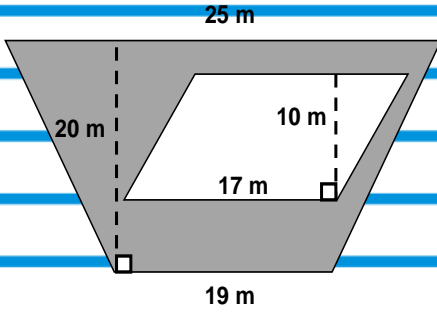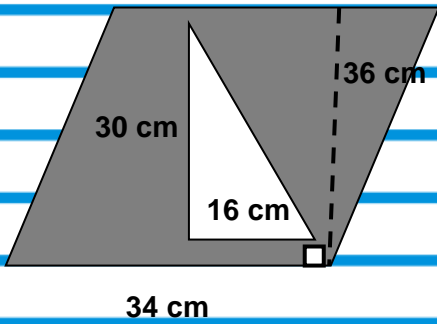
# Surface Area

Find the Surface Area



**1,820 in²**

22 in

26 in

Find the Surface Area



5 m

15 m

45 m
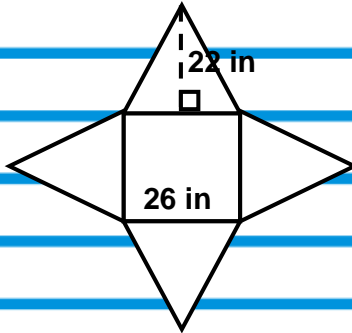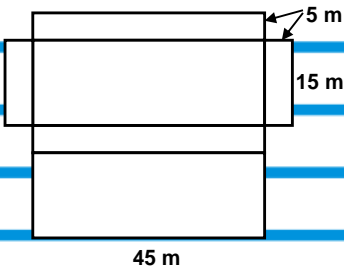
**1,950 m²**

Find the Surface Area
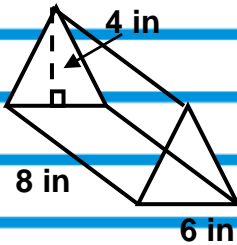


4 in

8 in

6 in

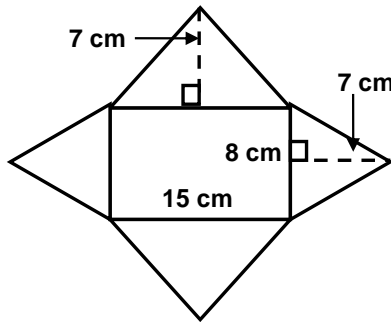**168 in²**

A cracker company wants to create a new eco-friendly design for their package which uses the least amount of cardboard.  Which takes less cardboard to make:  2 boxes that are 5x8x9 inches or 1 box of 12x11x7 inches?

628 in$^2$ and 586 in$^2$

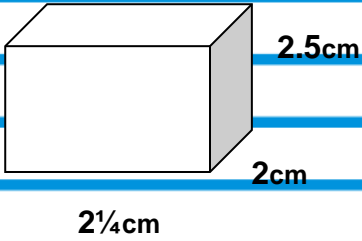Casey wants to paint the surface of a wooden pyramid he built.  Use the net below to calculate how many cans of paint Joseph will need to buy in order to paint his pyramid if a can covers 100 cm$^2$.
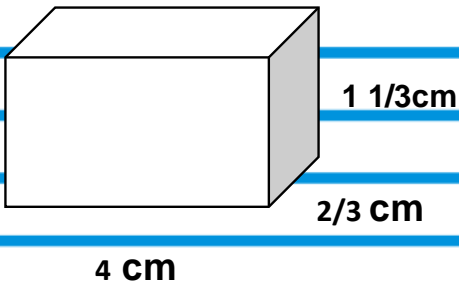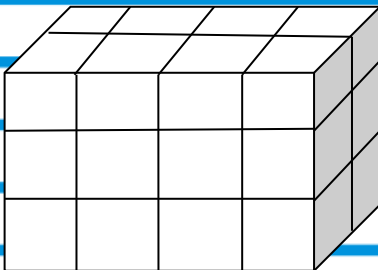
7 cm

7 cm

8 cm

15 cm

SA:  232 cm$^2$

3 cans

# Volume

2.5cm

2cm

2¼cm

**11.25 cm³**

1 1/3cm

2/3 cm

4 cm

**3 5/9 cm³**

Each small cube has a length, width and height of ½ unit.

**3 units³**

# Volume & Surface Area Performance Task

A cereal company is selecting packaging for their new product Fruity Os. Both packages are rectangular prisms. They need the package to hold at least 140 $in^3$ of cereal, and use the least amount of packaging material. Option A is 12 in high, 6 in long, and 2.5 in wide. Option B is 8 inches high, 6 inches long, and 3 inches wide.

How much cereal will package A hold?   180 $in^3$

How much cereal will package B hold?   144 $in^3$

How much cardboard will package A require?  234 $in^2$

How much cardboard will package B require?  180 $in^2$

Which package should the company choose? Why?

The company should choose package B. Both packages hold all

of the cereal, but package B uses less cardboard.

# Polygons in the Coordinate Plane

Plot the following points and connect them in the order given. What would be the coordinate of a fourth point that would form a parallelogram?
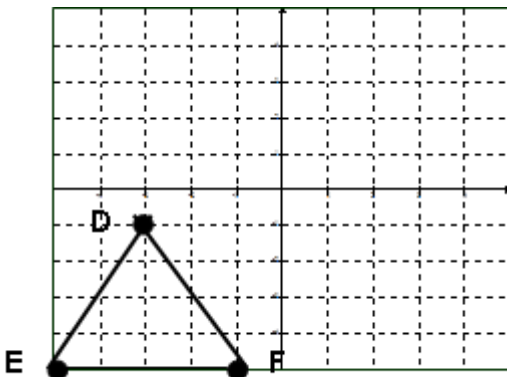
(3,-2) S (3,3) T (0,5)
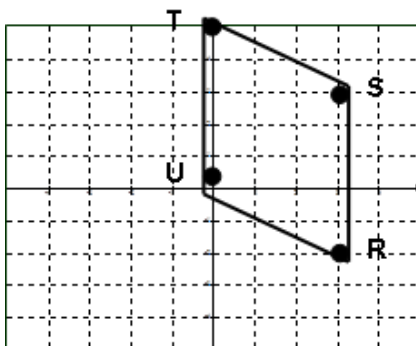


(0, 0)

Plot the following points in the order given. What is the area of the shape formed?

D (-3,-1) E (-5,-5) F (-1,-5)
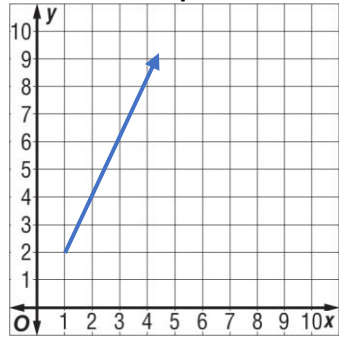


8 units²

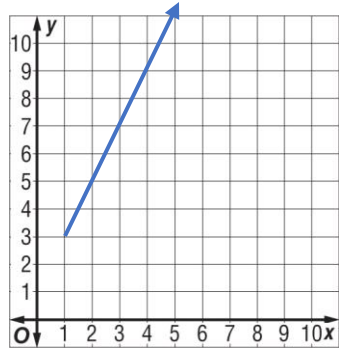# Blast from the Past:  Graphing Equations

| Equation | Table | Graph |
|----------|-------|-------|

**y = 2x**

| x | y |
|---|---|
| 1 | 2 |
| 2 | 4 |
| 3 | 6 |
| 4 | 8 |

**y = 2x + 1**

| x | y |
|---|---|
| 1 | 3 |
| 2 | 5 |
| 3 | 7 |
| 4 | 9 |

**y = x + 6**

| x | y |
|---|---|
| 1 | 7 |
| 2 | 8 |
| 3 | 9 |
| 4 | 10 |