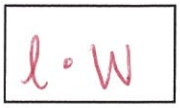
Name: Key
DISCRETE

Date: 5/25/18
TROICI/GOSSE

FINAL REVIEW #8: AREA AND DESIGNING A ROOM

FINAL EXAM: 5/31/18 & 6/1/18

Area Formulas:



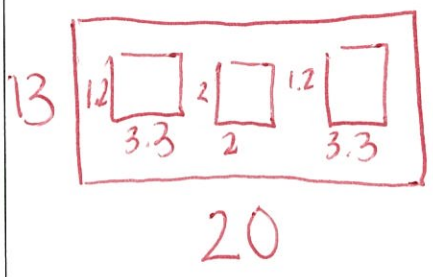
Rectangle

Square

Circle

1) Jeffrey bought a table that is in the shape of a rectangle. The table is 8 feet long and 5 feet wide. What is the area of the table? $A = 8 \cdot 5 = 40 ft^2$	2) Diana bought a desk that is in the shape of a rectangle. The desk is 6 inches long and 2 inches wide. What is the area of the desk? $A = 6 \cdot 2 = 12 ft^2$
3) Kerry bought a picture that is in the shape of a rectangle. The picture is 4.2 feet long and 6.7 feet wide. What is the area of the picture? $A = 4.2 \cdot 6.7 = 28.14 ft^2$	4) Alexa bought a desk that is in the shape of a rectangle. The desk is 5.3 inches long and 7.4 inches wide. What is the area of the desk? $A = 5.3 \cdot 7.4 = 39.22 in^2$
5) A circular table has a radius of 3 feet. What is the area of the table? Round your answer to the nearest tenth. $A = \pi (3)^2$ $A = 28.3 ft^2$	6) A circular table has a radius of 9 feet. What is the area of the table? Round your answer to the nearest tenth. $A = \pi (9)^2$ $A = 254.5 ft^2$
7) A circular table has a diameter of 8 feet. What is the area of the table? Round your answer to the nearest tenth. $d = 8$ $r = 4$ $A = \pi (4)^2$ $A = 50.3 ft^2$	8) A circular table has a diameter of 5 feet. What is the area of the table? Round your answer to the nearest tenth. $d = 5$ $r = 2.5$ $A = \pi (2.5)^2$ $A = 19.6 ft^2$

9) The wall of a room is 20 feet by 13 feet. I bought 2 posters; each poster is 1.2 feet wide by 3.3 feet long, there is also a square window that measures 2 feet wide. How much of the wall is *not* covered by the posters or the window?



$A_{BIG} - A_{SMALL}$

$A_{BIG} = 13 \times 20 = 260$

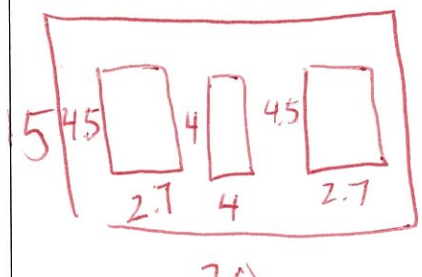
$A_{SMALL} = 1.2 \times 3.3 = 3.96 \times 2 = 7.92$

$2 \times 2 = 4$

$7.92 + 4 = 11.92$

$260 - 11.92 = 248.08 ft^2$

10) The wall of a room is 20 feet by 15 feet. I bought 2 posters; each poster is 4.5 feet wide by 2.7 feet long, there is also a square window that measures 4 feet wide. How much of the wall is *not* covered by the posters or the window?



$A_{BIG} = 15 \times 20 = 300$

$A_{SMALL} = 4.5 \times 2.7 = 12.15 \times 2 = 24.3$

$4 \times 4 = 16$

$24.3 + 16 = 40.3$

$300 - 40.3 = 259.7 ft^2$

11) One of the walls in Billy's bedroom has 2 windows. Each window is 3 feet wide by 4.5 feet tall. The wall is 17 feet long by 19 feet wide. He also has 2 posters each measuring 1.5 feet by 3 feet.

a. How much wall space does Billy have?

$A_{BIG} = 17 \times 19 = 323$

$A_{small} = 3 \times 4.5 = 13.5 \times 2 = 27$
$1.5 \times 3 = 4.5 \times 2 = 9$ } 36

$323 - 36 =$ **287 ft²**

b. Billy wants to paint the wall yellow and each can covers 15 square feet. How many cans of paint does Billy need to buy?

$\frac{287}{15} = 19.13 =$ **20 cans**

c. If the price of the paint per can is $22.83 and the sales tax is 8.625%. What is the total cost of the paint?

$20 \times 22.83 = 456.6$

$456.6 \times .08625 = 39.38$

$456.6 + 39.38 =$ **$495.98**

12) One of the walls in Jason's bedroom has 2 windows. Each window is 2.1 feet wide by 5.2 feet tall. The wall is 20 feet long by 13 feet wide. He also has 2 posters each measuring 1.5 feet by 4 feet.

a. How much wall space does Jason have?

$A_{BIG} = 20 \times 13 = 260$

$A_{small} = 2.1 \times 5.2 = 10.92 \times 2 = 21.81$
$1.5 \times 4 = 6 \times 2 = +12$ } 33.81

$260 - 33.81 =$ **226.19**

b. Jason wants to paint the wall blue and each can covers 23 square feet. How any cans of paint does Jason need to buy?

$\frac{226.19}{23} = 9.83 =$ 10 cans

c. If the price of the paint per can is $24.32 and the sales tax is 8.625%. What is the total cost of the paint?

$10 \times 24.32 = 243.2$

$243.2 \times .08625 = 20.98$

$243.2 + 20.98 =$ **264.18**

13) A rectangle has an area measuring 30 square centimeters. Its length and width are whole numbers of centimeters. What are the possible combinations of length and width? Create a list to show all possibilities.

Length	width	Area	perimetr
1	30	30	1+1+30+30 = 62
2	15	30	2+2+15+15 = 34
3	10	30	3+3+10+10 = 26
5	6	30	5+5+6+6 = 22

14) A rectangle has an area measuring 32 square centimeters. Its length and width are whole numbers of centimeters. What are the possible combinations of length and width? Create a list to show all possibilities.

Length	width	Area	Perimeter
1	32	32	1+1+32+32 = 66
2	16	32	2+2+16+16 = 36
4	8	32	4+4+8+8 = 24

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TROICI/GOSSE

FINAL REVIEW #8: EXIT TICKET

1) Jill bought a table that is in the shape of a rectangle. The table is 6 feet long and 4 feet wide. What is the area of the table?

$A = 6 \times 4 = 24 \text{ ft}^2$

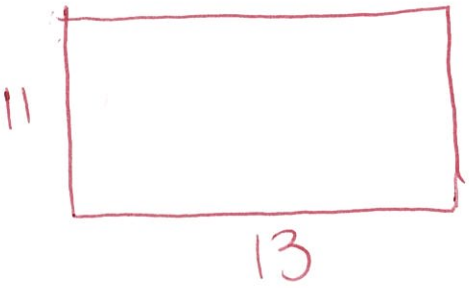
2) A circular table has a radius of 8 feet. What is the area of the table? Round answer to the nearest tenth.

$A = \pi(8)^2$

$A = 201.1 \text{ ft}^2$

3) One of the walls in Cliff's bedroom has 2 windows. Each window is 3 feet wide by 4.7 feet tall. The wall is 11 feet long by 13 feet wide. He also has 2 posters each measuring 1.2 feet by 2.3 feet.

a. How much wall space does Cliff have?



$11 \times 13 = 143$

$3 \times 4.7 = 14.1 \times 2 = 28.2$

$1.2 \times 2.3 = 2.76 \times 2 = 5.52$

$143 - 33.72 = 109.28$

b. Cliff wants to paint the wall blue and each can covers 18 square feet. How many cans of paint does Cliff need to buy?

$\frac{109.28}{18} = 6.07 = 7 \text{ cans}$

c. If the price of the paint per can is $23.21 and the sales tax is 8.625%. What is the total cost of the paint?

$7 \times 23.21 = 162.47$

$162.47 \times .08625$

14.01

$162.47 + 14.01 = \$176.48$