

## Jumping Jellies!

Use the information from the scenario below to answer the questions.

Annie has a big bowl of jelly beans. She has the following number of each flavor:

25 strawberry

25 lemon

50 pineapple

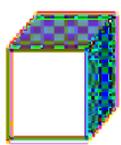
25 blueberry

75 lime

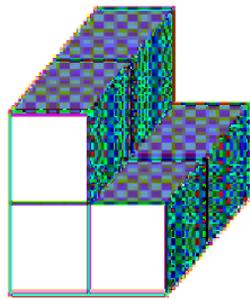


1. How many strawberry jelly beans are there?
2. How many blueberry jelly beans are there?
3. How does the number of strawberry jelly beans compare to the number of blueberry jelly beans?
4. How many pineapple jelly beans are there?
5. How many jelly beans are there altogether?
6. How does the number of pineapple jelly beans compare to the total number of jelly beans?  
What fraction of the jelly beans are pineapple?

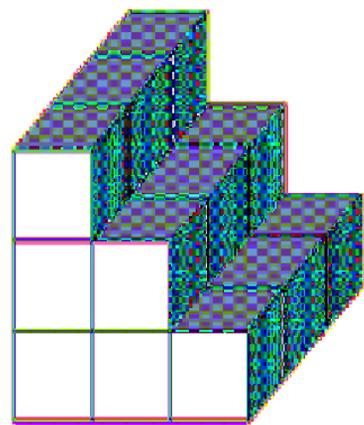
How many cubes will it take to build the next shape (STAGE 4) shown in the patterns below?



STAGE 1



STAGE 2



STAGE 3



STAGE 4  
(You Draw It)

(USE THE TABLE BELOW)

STAGE Number	Number of Cubes
1	
2	
3	
4	

Answer: There are \_\_\_\_\_ cubes in Stage 4.

### Solving Proportions

Remember that a proportion is two equal ratios.

$$\frac{a}{b} = \frac{c}{d}$$

To solve a proportion, cross-multiply.

$$\frac{a}{b} = \frac{c}{d}$$

$$ad = bc$$

Solve the following proportions for  $x$ .

1.  $\frac{x}{3} = \frac{6}{9}$

2.  $\frac{1}{2} = \frac{x}{5}$

3.  $\frac{3}{4} = \frac{8}{x}$

### Key Ideas

#### Cross Products

In the proportion  $\frac{a}{b} = \frac{c}{d}$ , the products  $a \cdot d$  and  $b \cdot c$  are called **cross products**.

#### Cross Products Property

**Words** The cross products of a proportion are equal.

#### Numbers

$$\frac{2}{3} = \frac{4}{6}$$

$$2 \cdot 6 = 3 \cdot 4$$

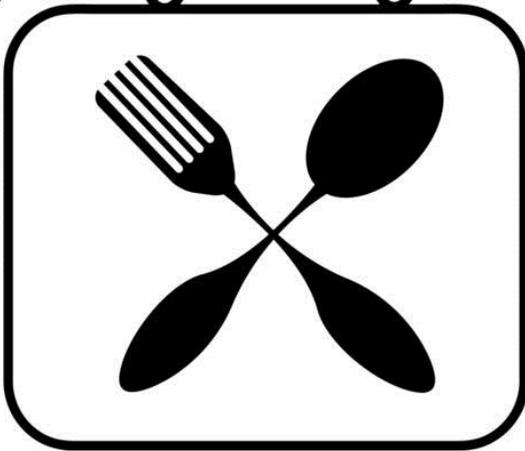
#### Algebra

$$\frac{a}{b} = \frac{c}{d}$$

$$ad = bc,$$

where  $b \neq 0$  and  $d \neq 0$

## Henry's Restaurant



At Henry's Restaurant, a customer gets a free lunch after paying for six meals. Caroline ate lunch at Henry's 50 times last year. How many of those 50 lunches were free meals?

**ANSWER:** \_\_\_\_\_

To make it easier for customers to keep track, Henry's Restaurant gives it customers this handy card to keep track of their purchases. How can you use it to help you answer the question above?



1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50

## Money, Money, Money

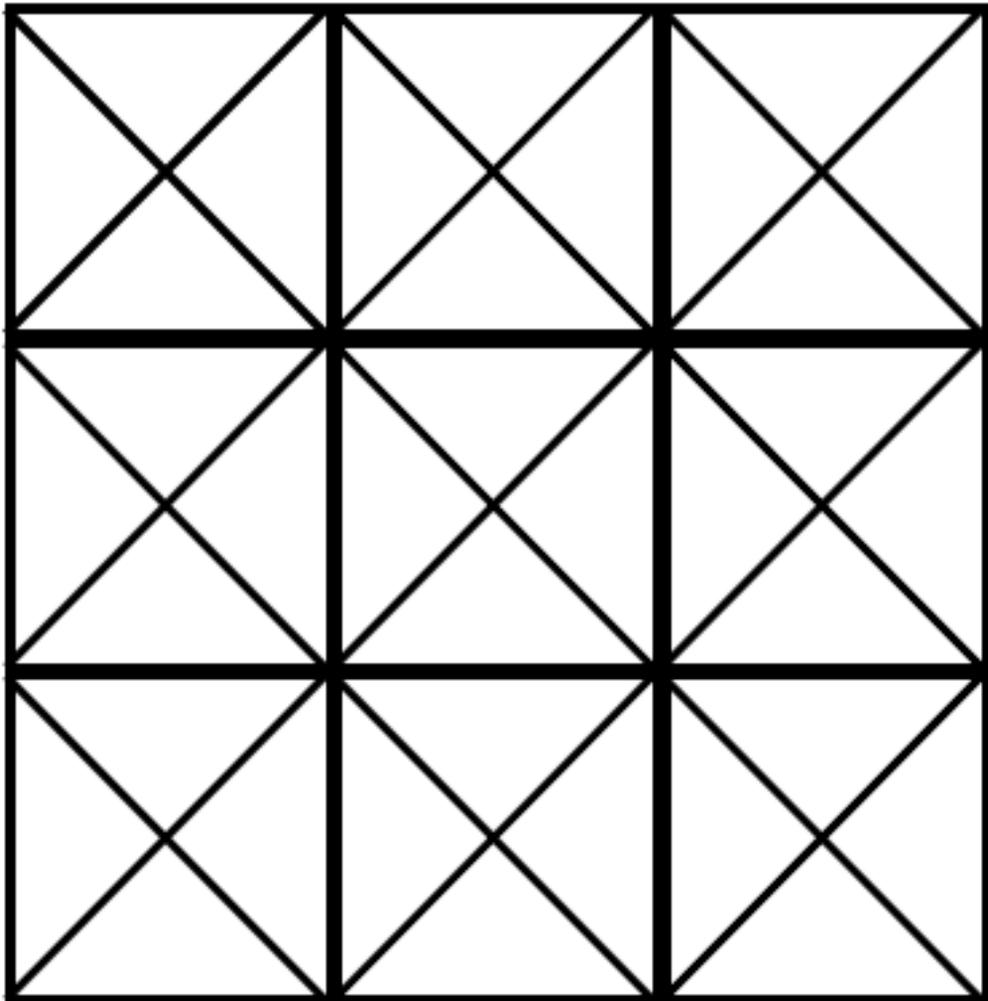
You got a great job babysitting for \$8 an hour. Fill out the table below to figure out how much you would make if you worked a full 8-hour day.

Number of hours	Amount earned
1	\$8
2	
3	\$24
	\$32
5	
6	
	\$56
8	



CCSS 7.RP

Given the 9 SQUARES figure below, lightly shade 50% of the squares. Shade in 25% of the remaining squares darker than the lightly shaded ones. Leave 25% of the squares white (unshaded).



## Birthday Roses

Read the scenario and answer the question that follows.

Alonzo is planning to purchase roses for his mother on her birthday. He has seen them advertised at 12 roses for \$15.00 and 20 roses for \$23.00.

Which is the better buy? Show your work and explain your reasoning.

**CHOICE A: 12 Roses for \$15.00**

**CHOICE B: 20 Roses for \$23.00**

**Choice \_\_\_\_\_ is the better buy for Alonzo. You have determined that it is \$\_\_\_\_\_ cheaper per rose.**

CCSS 7.RP

**When rolling two dice, is it more likely to get a sum of 3 or a sum of 7?**

**A sum of \_\_\_\_\_ is more likely.**

**Why is that sum more likely than the other sum ? Explain:**



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## Paolo's Pizza Pricing

Paolo has just started working at his Uncle Antonio's pizza parlor. He is trying to figure out which size meat lover's pizza provides the best value.



Size	Price
8-inch round pizza	\$10.50
12-inch round pizza	\$15.00
18-inch round pizza	\$19.00

Which pizza listed on the menu provides the best value? Write a few sentences that explain your reasoning.

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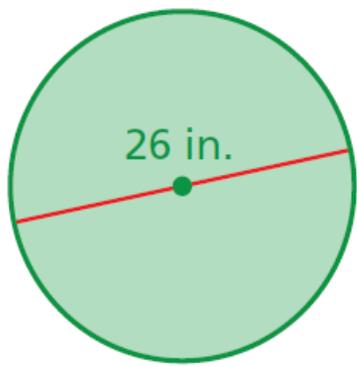
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Find the area of the circle. Use 3.14 for  $\pi$ .

The radius is  $26 \div 2 = 13$  inches.



$$\begin{aligned}
 A &= \pi r^2 \\
 &\approx 3.14 \cdot (13)^2 \\
 &= 3.14 \cdot 169 \\
 &= 530.66
 \end{aligned}$$

Write formula for area.  
 Substitute 3.14 for  $\pi$  and 13 for  $r$ .  
 Evaluate  $(13)^2$ .  
 Multiply.

••• The area is about 530.66 square inches.

A pizza's AREA increases as the pizza size becomes larger. Determine which pizza size offers the best value (lowest price per square inch).

8"  
\$10.50

$$\begin{aligned}
 3.14 \times (4)^2 &= 3.14 \times 16 = 50.24 \\
 50.24 \text{ divided by } \$10.50 &= \$4.78 \text{ per inch.}
 \end{aligned}$$

12"  
\$15.00

18"  
\$19.00

\*\*How does the 12" and the 18" pizza compare in price?