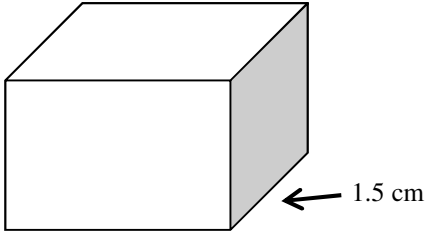
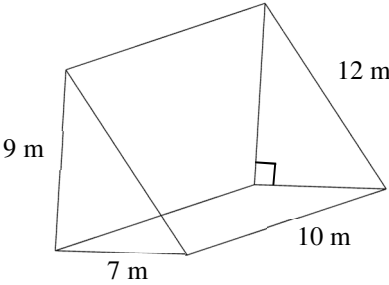
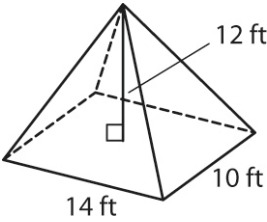
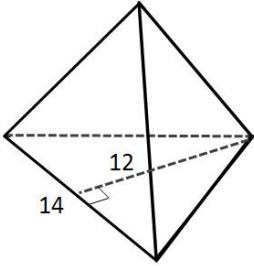


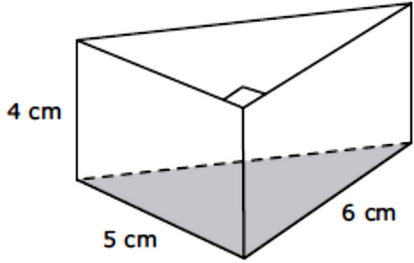
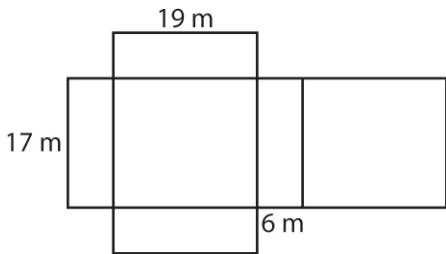
For full credit, show all work. Label all answers.

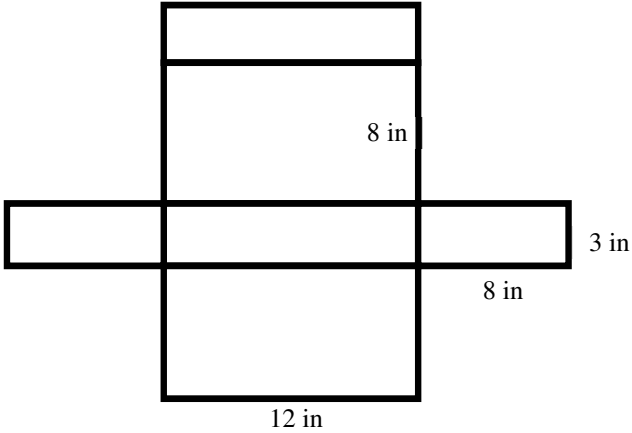
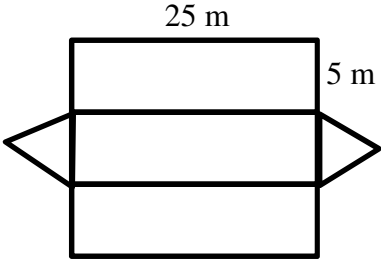
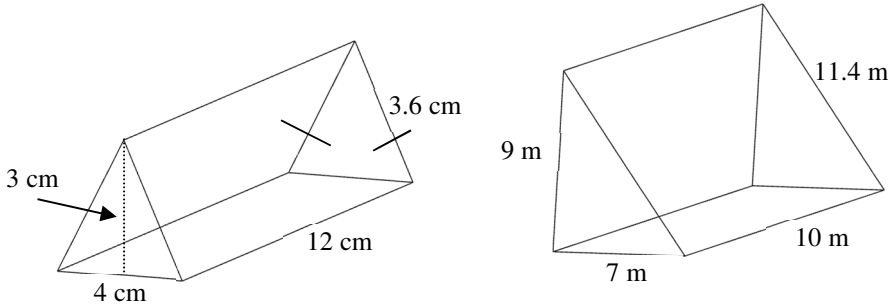
For all problems involving a formula, show the formula and each step to receive full credit.

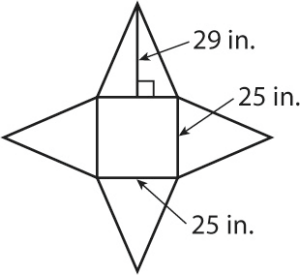
1.	Mari has a box of laundry soap that is $\frac{3}{4}$ full. The box measures 6 cm by 20 cm by 30 cm. What is the volume of laundry soap left in the box?	2700 cm <sup>3</sup>
2.	<p>A box is shown below. Use a ruler to measure the front dimensions of the jewelry box in centimeters. What is the volume of the box?</p> 	9 cm <sup>3</sup>

For problems below find the volume.

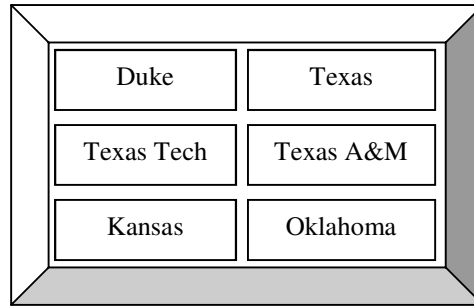
3.		4.	
315 m <sup>3</sup>		560 ft <sup>3</sup>	
5.	<p>The height of this pyramid is 10 units.</p> 		
280 ft <sup>3</sup>			

6.	<p>Mr. Mangham was cutting a wedge of cheese into the shape of a triangular prism like the one shown below. The shaded part represents one of the bases of the prism.</p>  <p>A formula for the volume of a triangular prism is <math>V = Bh</math>. Which equation can be used to find <math>B</math>, the area of the shaded base in square centimeters?</p> <p>A <math>B = 5(6)</math>      B <math>B = 4(5)</math>      C <math>B = \frac{5(6)}{2}</math>      D <math>B = \frac{4(5)}{2}</math></p>	C
7.	<p>The volume of a rectangular pyramid is 4,000 cubic feet. The area of the base is 40 square feet. What is the height of the pyramid?</p> <p>A 100 ft      B 300 ft      C 400 ft      D 1,600 ft</p>	B
8.	<p>A triangular pyramid has a height of 18 yards and a base with an area of 330 square yards. What is the volume of the pyramid?</p> <p>A 660 yd<sup>3</sup>      C 2,970 yd<sup>3</sup>  B 1,980 yd<sup>3</sup>      D 5,940 yd<sup>3</sup></p>	B
9.	<p>A wooden block is shaped like a triangular prism that has a height of 4 inches and a base with an area of 48 square inches. The blocks are packed 6 to a box. What is the volume of blocks in 5 boxes?</p>	5760 in <sup>3</sup>
10.	 <p>What is the total surface area of the rectangular prism whose net is shown?</p> <p>A 539 m<sup>2</sup>      B 850 m<sup>2</sup>      C 1,078 m<sup>2</sup>      D 1,250 m<sup>2</sup></p>	C
11.	<p>Assuming that the base in the previous question is the 17m by 19m rectangle, what is the lateral surface area of the rectangular prism whose net is shown?</p> <p>A 204 m<sup>2</sup>      B 228 m<sup>2</sup>      C 432 m<sup>2</sup>      D 850 m<sup>2</sup></p>	C

12.	<p>Find the total surface area of the prism's net shown below.</p> 	312 in <sup>2</sup>
13.	<p>Find the lateral surface area of the prism's net show below.</p> 	375 m <sup>2</sup>
14. 15.	<p>For the problems find the <b>total surface area</b>. Show all steps. <b>LABEL!</b></p> 	<p>146.4 cm<sup>2</sup></p> <hr/> <p>337 m<sup>2</sup></p>

16.	Hannah wants to cover a cardboard box with glitter. The box is a rectangular prism measuring 4 inches tall, 6 inches wide, and 8 inches long. Each tube of glitter covers 25 square inches. How many tubes of glitter will Hannah need to buy?	9 tubes
17.	<p>Use the net to answer the following 2 questions.</p>  <p>What is the total surface area of the rectangular pyramid whose net is shown?</p> <p>A 2,075 in<sup>2</sup>                      C 3,725 in<sup>2</sup>  B 3,525 in<sup>2</sup>                      D 4,150 in<sup>2</sup></p>	A
18.	<p>What is the lateral area of the rectangular pyramid whose net is shown?</p> <p>A 625 in<sup>2</sup>                      C 1,725 in<sup>2</sup>  B 1,450 in<sup>2</sup>                      D 2,075 in<sup>2</sup></p>	B
19.	A chef makes cakes shaped like triangular pyramids. Each face of the pyramid is an equilateral triangle with side lengths of 3 inches and height of 2.6 inches. Icing costs \$0.07 to cover 1 square inch. To the nearest cent, how much does it cost to cover the lateral area of each triangular pyramid with icing?	\$0.82
20.	A cake pan is shaped like a rectangular prism. The pan's volume is 216 in <sup>3</sup> . The cake pan has a base that is 12 inches by 9 inches. What is the height of the cake pan?	2 in
21.	A bathtub is filled with water. It holds 60 cubic feet of water. The tub is 6 feet long and 5 feet wide. What is the height of the tub?	2 ft
22.	Anu has a gold bar that is 7 inches long, 3.5 inches wide, and 1.75 inches thick, the same size as the gold stored in Ft. Knox. If the weight of the gold is 0.7 pounds per cubic inch, find the weight of 1000 gold bars.	30,012.5 lbs

Suppose you choose one of the cards containing colleges shown below without looking. Find the probability of each event.



23.	P(Duke)	$\frac{1}{6}$	26.	P(Not Kansas)	$\frac{5}{6}$
25.	P(Texas or Texas A&M)	$\frac{1}{3}$	28.	P(a school with a letter "E")	$\frac{2}{3}$

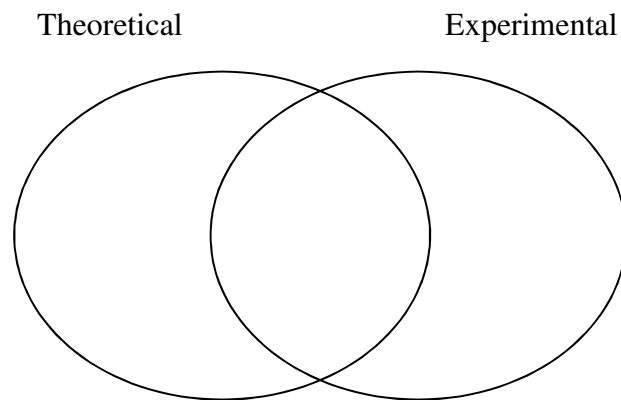
Mrs. Loewen has a collection of 30 hats. 12 are brown, 6 are blue, 8 are red, and 4 are white. She picks one out of her collection without looking. Find the probability of each event.

27.	P(Brown OR Red)	$\frac{3}{5}$	28.	P(Not White)	$\frac{13}{15}$
-----	-----------------	---------------	-----	--------------	-----------------

29.	If you draw a card out of a normal deck (52 cards) 91 times (and always then return it), how many times would you expect to get a red 5, 6, 7, or 8?	14
30.	If you roll a die 24 times, about how many times would you expect to get a number greater than 2?	16

31. In Survivor everyone has an equal chance of winning. The last 50 times we have played, you have won 7 times. Use the Venn Diagram below to correctly place all of the items. You may just write the letter.

- A.  $\frac{7}{50}$
- B.  $\frac{1}{\text{people in your class}}$
- C. a form of probability
- D. best number to use to help predict how many times you will win in the next 1000 games
- E. based on actual results from playing the game
- F. less than 15%



For each situation make a **tree diagram or organized list below** to show all of the possible outcomes.

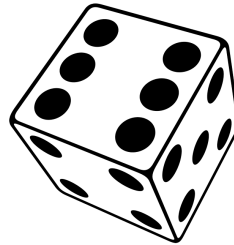
		Number of outcomes
32.	Choosing oatmeal, chocolate chip, or peanut butter cookies and then taking 1 or 2 of them  (Type, Number) Oatmeal, 1 Oatmeal, 2 Chocolate Chip, 1 Chocolate Chip, 2 Peanut Butter, 1 Peanut Butter, 2	6
33.	Math, LA, SS, and Science: Choosing one as your favorite subject and one as your least favorite  (Favorite, Least Favorite)                      (Favorite, Least Favorite) Math, LA    SS, Math Math, SS    SS, LA Math, Science    SS, Science LA, Math    Science, Math LA, SS    Science, LA LA, Science    Science, SS	12

Find the total number of possible outcomes in each situation. You may use either a tree diagram or The Counting Principle. **Show your work as your notebook paper even if you think you can solve it in your head!**

34.	Building Mr. Potato Head with a choice of 4 different ears, 6 eyes, 5 noses, and either a happy or a sad mouth.	240
35.	Choosing a 4-digit password using the numbers 1 to 9 without repeating any digits.	3024
36.	At McDonald's you have a choice of 5 different Kids' Meals that can come with 7 different sodas. In each meal you get one prize: a yo-yo, a car, or a pen.	105
37.	Choosing out of 10 names a first, second, and third prize winner for a door prize.	720

38.	There are 3 red marbles, 3 blue marbles, and 1 green marble in a bag. A marble is drawn at random and not replaced. Then a second marble is drawn. Which choice shows all the possible outcomes?	D
	A red/blue, red/green, blue/red, blue/green, green/red, green/blue	
	B red/red, red/blue, red/green, blue/red, blue/blue, blue/green, green/red, green/blue, green/green	
	C red/blue, red/green, blue/red, blue/green, green/red, green/green	
D red/red, red/blue, red/green, blue/red, blue/blue, blue/green, green/red, green/blue		

You flip a coin and role a regular six-sided die. Find the probability of each event.



39.	P(tails, 5)	$\frac{1}{12}$	45.	P(heads, not 3)	$\frac{5}{12}$
41.	P(heads, even number)	$\frac{1}{4}$			

The following cards are cut and placed in a box:

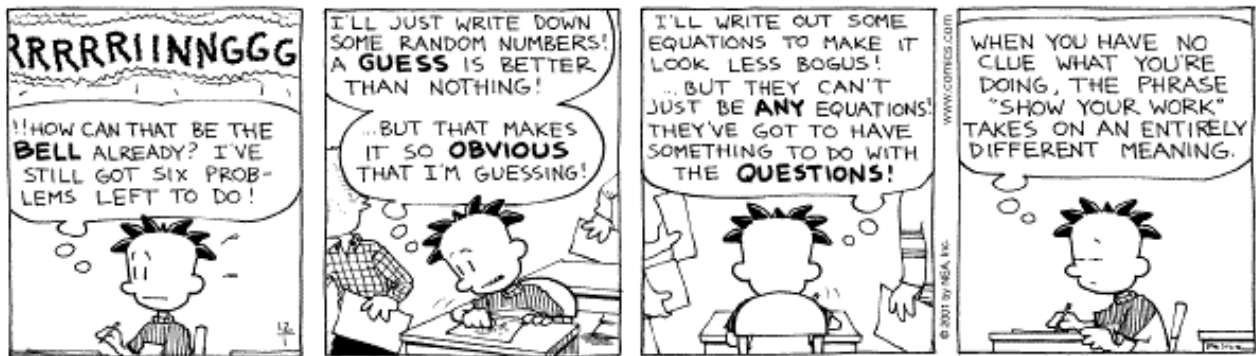
S	U	R	V	I	V	O	R	S
---	---	---	---	---	---	---	---	---

Mr. Mangham draws three cards and does not replace them. Find the probability of each event.

42.	P(S, I, S)	$\frac{1}{252}$	43.	P(U, I, O)	$\frac{1}{504}$
-----	------------	-----------------	-----	------------	-----------------

44.	There are 4 yellow sticks, 6 red sticks, and 8 green sticks in the grand finale of Mr. Mangham's Survivor. What is the probability that the four kids with yellow sticks will be the next four sticks drawn?	$\frac{1}{3060}$
45.	You flip five coins all at the same time. What is the probability they will all land on heads?	$\frac{1}{32}$

46.	Morgan saw 10 blue, 8 red, and 42 white cars drive by her house in 1 hour. What is the experimental probability, written as a decimal, that the next car that drives by her house will <b>not</b> be a white car?	0.3											
47.	<b>Darian's Survey Results</b>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Food</th> <th style="width: 25%;">Number of Students</th> <th style="width: 25%;">Food</th> <th style="width: 25%;">Number of Students</th> </tr> </thead> <tbody> <tr> <td>Pizza</td> <td style="text-align: center;">8</td> <td>Pasta</td> <td style="text-align: center;">14</td> </tr> <tr> <td>Hamburger</td> <td style="text-align: center;">12</td> <td>Steak</td> <td style="text-align: center;">6</td> </tr> </tbody> </table>	Food	Number of Students	Food	Number of Students	Pizza	8	Pasta	14	Hamburger	12	Steak	6
Food	Number of Students	Food	Number of Students										
Pizza	8	Pasta	14										
Hamburger	12	Steak	6										
Darian recorded the favorite food of students in his class. Based on the results of his survey, what is the experimental probability the next student he surveys will respond "Pizza" or "Steak"?													
48.	Elizabeth wants to use a standard die to do a simulation for a scenario that involves three equal outcomes. What is one way in which she can do this?	Outcome 1: Roll a 1 or 2 Outcome 2: Roll a 3 or 4 Outcome 3: Roll a 5 or 6											
49.	If the probability of an event happening is $p$ , what is an algebraic expression that represents the probability that the event does <b>not</b> happen?	$1 - p$											
50.	A bag contains 5 red marbles, 6 green marbles, and 3 blue marbles. If Chelsea draws a marble, puts it back in the bag and then draws another marble, what is the probability that both marbles she draws will be red?  A $\frac{5}{14} \cdot \frac{4}{13}$ C $\frac{5}{14} + \frac{4}{13}$ B $\frac{5}{14} \cdot \frac{5}{14}$ D $\frac{5}{14} + \frac{5}{14}$	B											



Copyright © 2001 Newspaper Enterprise Association, Inc.