

Exploring the Size of a Million Dollars

Students: 1, 2 or 3

Materials: 1000 one-dollar bills

FCAT conversion sheet

Laminated Airline Baggage Sizes

1 Calculator

1 ruler

Just as you decide to go to bed one night, the phone rings and a friend offers you a chance to be a millionaire. He tells you he won \$2 million in a contest. The money was sent to him in two suitcases, each containing \$1 million in one-dollar bills. He will give you one suitcase of money if your mom or dad will drive him to the airport to pick it up. Could your friend be telling you the truth? Can he make you a millionaire?

Pick suitcases from 3 different airlines and answer the following questions:

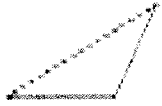
Can \$1,000,000 in one-dollar bills fit in the suitcase?

If not, what is the smallest denomination of bills you could use to fit the money in the suitcase?

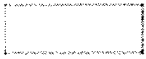
Could you lift the suitcase if it contained \$1,000,000 in one-dollar bills?

Note: The dimensions of a one-dollar bill is approximately 5.75 inches by 2.5 inches. Twenty one-dollar bills weight approximately 0.7 ounces.

Grades 6-8 FCAT Mathematics Reference Sheet



Triangle
Area
 $A = 1/2 bh$



Rectangle
 $A = lw$



Trapezoid
 $A = 1/2 h (b_1 + b_2)$



Parallelogram
 $A = bh$



Circle
 $A = \pi r^2$

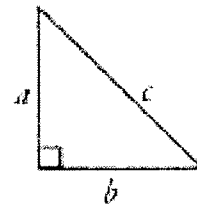
KEY	
b = base	d = diameter
h = height	r = radius
l = length	A = area
w = width	C = circumference
S.A. = Surface area	V = volume
Use 3.14 or 22/7 for π	

Circumference

$$C = \pi d = 2\pi r$$

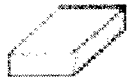
In a polygon, the sum of the measures of the interior angles is equal to $180(n - 2)$, where n represents the number of sides.

Pythagorean theorem: $c^2 = a^2 + b^2$



Right Circular Cylinder
Volume
 $V = \pi r^2 h$

Total Surface Area
 $S.A. = 2\pi rh + 2\pi r^2$



Rectangular Solid
 $V = lwh$

$S.A. = 2(lw) + 2(hw) + 2(lh)$

Conversions

1 yard = 3 feet = 36 inches
1 mile = 1,760 yards = 5,280 feet
1 acre = 43,560 square feet
1 hour = 60 minutes
1 minute = 60 seconds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 liter = 1000 milliliters = 1000 cubic centimeters
1 meter = 100 centimeters = 1000 millimeters
1 kilometer = 1000 meters
1 gram = 1000 milligrams
1 kilogram = 1000 grams

1 pound = 16 ounces
1 ton = 2,000 pounds

Metric numbers with four digits are represented without a comma (e.g., 9960 kilometers). For metric number greater than four digits, a space is used instead of a comma (e.g., 12 500 liters).



Bags Allowed: 1
Dimensions: 45" total outside dimension
Weight Limit: 10 lbs.
Contact Info: (800) 237-6639
[View all AeroMexico carry-ons](#)



AIR CANADA
Bags Allowed: 1
Dimensions: 22" x 16" x 9"
Comments: 1 personal item less than 17"
Weight Limit: 22 lbs.
Contact Info: (800) 247-2262
[View all Air Canada carry-ons](#)



AIR CHINA
Bags Allowed: 1
Dimensions: 21" x 15" x 7"
Comments: First & Business Class are allowed 2 carry-on bags that cannot exceed 11lbs.
Weight Limit: 11 lbs.
Contact Info: (0086) 4008 100 999
[View all Air China carry-ons](#)



Bags Allowed: 1
Dimensions: 62" total outside dimension
Comments: 1 accessory in US and UK / 1 additional carry-on for First Class in other countries
Weight Limit: 26 lbs.
Contact Info: (800) 237-2747
[View all Air France carry-ons](#)



Bags Allowed: 1
Dimensions: 55" total outside dimension
Comments: 1 carry-on item and 1 personal item are allowed.
Weight Limit: None
Contact Info: (800) 247-8726
[View all AirTran Airways carry-ons](#)



Bags Allowed: 1
Dimensions: 24" x 17" x 10"
Extra Items: 1 personal item such as a laptop, briefcase or a purse is allowed
Weight Limit: 40 lbs.
Contact Info: 1-800-252-7522
[View all Alaska carry-ons](#)



Bags Allowed: 1
Dimensions: 22" x 13" x 9"
Weight Limit: 11 lbs.
Contact Info: (800) 223-5730
[View all Alitalia Airlines carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Weight Limit: 22 lbs.
Contact Info: (800) 235-9262
[View all All Nippon carry-ons](#)



Bags Allowed: 1
Dimensions: 51" total outside dimension
Comments: Visit usairways.com for information on international/express flights
Extra Items: 1 personal item such as a lap top case or a purse is allowed
Weight Limit: None
Contact Info: 1-800-371-4771
[View all America West carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: Visit aa.com for information on international flight restrictions
Extra Items: 1 additional item allowed with total outside dimensions no greater than 36"
Weight Limit: 40 lbs.
Contact Info: 1-800-433-7300
[View all American carry-ons](#)



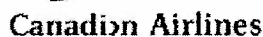
Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: 1 personal item that does not exceed 36 linear inches is allowed
Weight Limit: 40 lbs.
Contact Info: (800) 433-7300
[View all American Eagle carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: 1 personal item, which includes a purse, briefcase, laptop or diaper bag
Weight Limit: 40 lbs.
Contact Info: (800) 221-1212
[View all Atlantic Southeast carry-ons](#)



Bags Allowed: 1
Dimensions: 22" x 17" x 9"



Bags Allowed: 1
Dimensions: 22" x 16" x 9"



Bags Allowed: 1
Dimensions: 22" x 14" x 9"

Extra Items: In addition, one laptop sized bag, handbag or briefcase
Weight Limit: 51 lbs.
Contact Info: 1-800-247-9297
[View all British Airways carry-ons](#)

Extra Items: One additional business item allowed with dimensions 17"
Weight Limit: 32 lbs.
Contact Info:
[View all Canadian carry-ons](#)

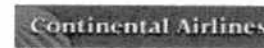
Comments: Business Class has 22lbs, and First Class has 33lbs weight allowance
Extra Items: First & Business Class is entitled to 1 garment bag or soft bag not exceeding 8 inch thick in addition to first carry-on bag
Weight Limit: 15 lbs.
Contact Info: (800) 233-2742
[View all Cathay Pacific carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Extra Items: 1 personal item such as a lap top case or a purse is allowed
Weight Limit: 11 lbs.
Contact Info: 1-800-227-5118
[View all China carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: 1 personal item, which includes a purse, briefcase, laptop or diaper bag
Weight Limit: 40 lbs.
Contact Info: (800) 221-1212
[View all Comair carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: Visit continental.com for restrictions on international flights
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 40 lbs.
Contact Info: 1-800-231-0856
[View all Continental carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 40 lbs.
Contact Info: 1-800-221-1212
[View all Delta carry-ons](#)



Bags Allowed: 1
Dimensions: 21" x 15" x 7"
Weight Limit: None
Contact Info: 0044 870 6 000 000
[View all EasyJet carry-ons](#)



Bags Allowed: 1
Dimensions: 22" x 15" x 8"
Comments: First & Business Class passengers are allowed an additional item but total weight of both carry-on items cannot exceed 26 lbs
Weight Limit: 15 lbs.
Contact Info: (800) 777-3999
[View all Emirates Airlines carry-ons](#)



Bags Allowed: 1
Dimensions: 49" total outside dimension
Comments: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 35 lbs.
Contact Info: (800) 265-5505
[View all Frontier carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: 1 additional personal item
Weight Limit: 25 lbs.
Contact Info: (800) 367-5320
[View all Hawaiian Airlines carry-ons](#)



Bags Allowed: 1
Dimensions: 24" x 17" x 10"
Comments: 1 personal item such as a purse, briefcase or laptop computer
Weight Limit: None
Contact Info: 800-547-9308
[View all Horizon Air carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed, but total weight of carry-ons cannot exceed 22lbs
Weight Limit: 22 lbs.
Contact Info: 1-800-525-3663
[View all Japan carry-ons](#)



Bags Allowed: 1
Dimensions: 26" x 18" x 12"
Comments: Dimensions for carry-ons on EMBRAER 190 plane are 24"x16"x10"
Extra Items: One small personal article with dimensions lesser than or equal to 18"
Weight Limit: None



Bags Allowed: 1
Dimensions: 22" x 14" x 10"
Comments: World Class/Europe Select customers carry-on items can weigh up to 8.2lbs & can have an additional item (17"x7"x13")
Extra Items: 1 additional personal item
Weight Limit: 6 lbs.
Contact Info: (800) 692-6955

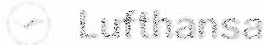
Contact Info: 1-800-538-2583
[View all JetBlue carry-ons](#)

[View all KLM carry-ons](#)

KOREAN AIR

Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: Internationally, First/Prestige class is allowed two carry-ons that total a weight less than 40lbs
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 25 lbs.
Contact Info: 1-800-438-5000

[View all Korean Air carry-ons](#)



Bags Allowed: 1
Dimensions: 21" x 15" x 8"
Comments: Carry on restrictions are strictly enforced. Outside of US and Italy first class passengers are allowed 2 carry-ons.
Extra Items: A small personal item is allowed
Weight Limit: 17 lbs.
Contact Info: 1-800-399-5838

[View all Lufthansa carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: For flights outside of United States and Mexico, check mexicana.com.
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 22 lbs.
Contact Info: 1-800-531-3585

[View all Mexicana carry-ons](#)



Bags Allowed: 1
Dimensions: 21" x 15" x 9"
Comments: 1 personal item or briefcase (no larger than 6" w x 15" h x 18" l)
Weight Limit: 50 lbs.
Contact Info: (800) 452-2022

[View all Midwest Airlines carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: One additional bag allowed for First Class and Platinum WorldPerks Members
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 40 lbs.
Contact Info: 1-800-225-2525

[View all Northwest carry-ons](#)



Bags Allowed: 1
Dimensions: 21" x 15" x 7"
Weight Limit: 22 lbs.
Contact Info: (353) 1 249 7791

[View all Ryanair carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: Business and Economy Extra are allowed two pieces of carry-on baggage to and from Asia & US with the same restrictions
Weight Limit: 17 lbs.
Contact Info: (800) 437-9184

[View all SAS carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: One additional carry-on item is allowed for First and Business class seating
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: 15 lbs.
Contact Info: 1-800-742-8474

[View all Singapore carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: 1 additional personal item
Weight Limit: None
Contact Info: Delta: (800) 325-8224; United: (800) 221-6903

[View all SkyWest carry-ons](#)



Bags Allowed: 1
Dimensions: 24" x 16" x 10"
Extra Items: 1 additional personal item allowed
Weight Limit: None
Contact Info: 1-800-435-9792

[View all Southwest carry-ons](#)



Bags Allowed: 1
Dimensions: 45" total outside dimension
Comments: 1 additional personal item
Weight Limit: None
Contact Info: (800) CALL-TED

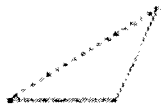
[View all Ted carry-ons](#)



Bags Allowed: 1
Dimensions: 51" total outside dimension
Comments: Express flights limit bags to 45 linear inches (19
Extra Items: One small personal article such as a briefcase, purse or laptop is allowed
Weight Limit: None
Contact Info: 1-800-428-4322

[View all US Airways carry-ons](#)

Grades 6-8 FCAT Mathematics Reference Sheet



Triangle

Area
 $A = 1/2 bh$



Rectangle

$A = lw$



Trapezoid

$A = 1/2 h (b_1 + b_2)$



Parallelogram

$A = bh$



Circle

$A = \pi r^2$

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b = base	d = diameter
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w = width	C = circumference
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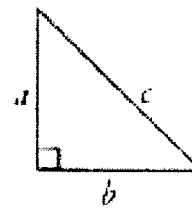
Use 3.14 or 22/7 for π

Circumference

$C = \pi d = 2\pi r$

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Pythagorean theorem: $c^2 = a^2 + b^2$

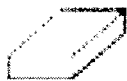


Right Circular Cylinder

Volume
 $V = \pi r^2 h$

Total Surface Area

$S.A. = 2\pi rh + 2\pi r^2$



Rectangular Solid

$V = lwh$

$S.A. = 2(lw) + 2(hw) + 2(lh)$

Conversions

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1 liter = 1000 milliliters = 1000 cubic centimeters
1 meter = 100 centimeters = 1000 millimeters
1 kilometer = 1000 meters
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1 kilogram = 1000 grams

1 pound = 16 ounces
1 ton = 2,000 pounds

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