Probability that a beaker contains less than a glass

$P(X - \frac{1}{4}B < 0)$

Probability that twice the capacity of a cup is more than the capacity of a glass

$P(C - 2A > 0)$

Probability that a cup contains more than a glass

$P(X - A < 0)$

$P(C - X - Y - A < 0)$

Probability that the capacity of a jug is more than three times the capacity of a glass

$P(Y - \frac{1}{2}A < 0)$

Probability that the capacity of a beaker is less than half the capacity of a glass

$P(X + Y - C < 0)$

$P(C + B - 2X - 2Y - 2A) < 0$

$P(Y - \frac{1}{4}B < 0)$

$P(2Y - A > 0)$

Probability that twice the capacity of a beaker is less than the capacity of a glass

P(Y − X < 0)

Probability that the total capacity of a beaker and a glass is less than the volume of a teapot

Probability that a beaker contains more than a cup

P(Y − A > 0)

P(B − 3A < 0)

P(Y + Y + Y − X − X − A < 0)

Probability that the total capacity of a teapot is more than double the capacity of a glass

P(X + A − C < 0)

Probability that the total capacity of a beaker and a cup is less than the volume of a teapot

Probability that the capacity of a cup is less than half the capacity of a glass

P(2X − A < 0)

P(B − X − Y − A > 0)

Probability that the total capacity of a cup is less than the total capacity of two beakers and a glass

Probability that the total capacity of three cups and a jug is less than twice the total contents of a beaker, a cup and a glass

Probability that the capacity of a cup is less than the total capacity of a beaker, a cup and a glass

$P\left(X - \tfrac{1}{2}A > 0\right)$

Probability that the capacity of a beaker is less than a quarter the capacity of a jug

P(X − Y > 0)

Probability that a cup contains more than a beaker

Probability that the capacity of a jug is less than the total capacity of a cup and a glass

Probability that the capacity of a cup is less than a quarter the capacity of a jug

The capacities of various containers are as follows:

Beakers, X, have a mean of 0.25 litres and a standard deviation of 0.02 litres.
Cups, Y, have a mean of 0.23 litres and a standard deviation of 0.03 litres.
Glasses, A, have a mean of 0.4 litres and a standard deviation of 0.05 litres.
Jugs, B, have a mean of 1.1 litres and a standard deviation of 0.1 litres.
Teapots, C, have a mean of 0.85 litres and a standard deviation of 0.04 litres.