① $\frac{2}{3} = 67\% =$ 

Best choice = (B)

② 17% → 0.17

* b is increased by 17% (0.17)
↓
+

(A) $b + 0.17b$

(F) $1.17b$ $(1b + 0.17b = 1.17b)$

* b is decreased by 17% (0.17)
↓
−

(H) $b - 0.17b$

(K) $0.83b$ $(1b - 0.17b = 0.83b)$

③ $\frac{\text{Landed on Red}}{\text{Total Spins}} = \frac{102}{300}$ *Divide! "Top in, bottom out"

$$\begin{array}{r} 0.34 \\ 300\overline{)102.00} \\ 0 \\ \hline 1020 \\ -900 \\ \hline 1200 \\ -1200 \\ \hline 0 \end{array}$$

0.34

300 | 3
900

300 | 4
1200

④ $\frac{2}{3}$ "Top in, bottom out"

$$\begin{array}{r} 0.666\ldots \\ 3\overline{)2.000} \\ -0 \\ \hline 20 \\ -18 \\ \hline 20 \\ -18 \\ \hline 20 \end{array}$$

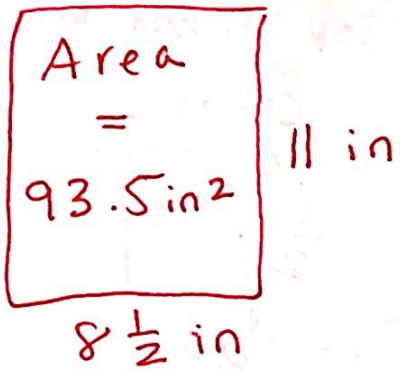
(C) $0.\overline{6}$

⑤ most reliable conclusion!

more people, more places!

(D)

(6)



$A = lw$

$A = 8\frac{1}{2} \times 11$

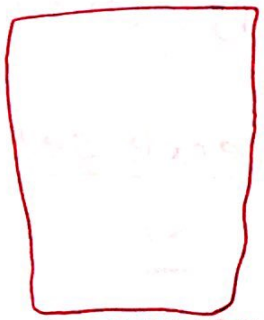
$A = 93.5 in^2$

$\frac{1}{20}\%$ → calc → [1] [a b/c] [20] [2nd] [%] [2] = [0.0005]

$11 \times 0.0005 = 0.0055$ → $11.0000 - 0.0055 = 10.9945$

$8\frac{1}{2} \times 0.0005 = 0.00425$

$8.50000 - 0.00425 = 8.49575$



$A = lw$

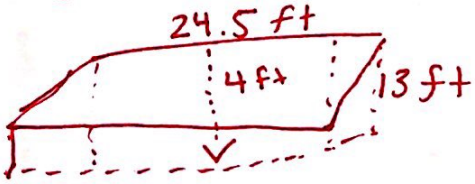
$A = 8.49575 \times 10.9945 in^2$

$A = 93.40652...$

$A = 93.407 in^2$ ★

★ ★

(7) Pool



$V = lwh$

$V = 24.5 \times 4 \times 13$

$V = 1,274 ft^3$

Each cubic foot = 7.48 gal

$1,274 \times 7.48 = 9,529.52$ gal

100% filled

80% filled → $9,529.52 \times 80\%$

$9,529.52 \times 0.80$

★ 7623.6 gal ★

(8) 

green
blue
red
yellow
markers (4 colors)

- Removes 3.
- Puts back
- Picks another 3
- Puts back
- Repeat...

✓ (A) (Possible)

✗ (B) (He picked 3, there are 4 colors. Impossible)

✓ (C) (Possible)

✓ (D) (Possible)

✗ (E) (Not likely)

(9) $C = \pi d$

$\frac{53.38}{3.14} = \frac{3.14d}{3.14}$

$17 = d$

diameter = 17

$\frac{17}{2} \rightarrow 8.5$ radius

$A = \pi r^2$

$A = 3.14 \times 8.5 \times 8.5$

$A = 226.865\ cm^2$ ★

(10) Unit Rate = 1

$\frac{\frac{2}{3}\ C \div \frac{1}{2}}{\frac{1}{2}\ tsp \div \frac{1}{2}} \rightarrow \frac{1\frac{1}{3}\ C}{1\ tsp}$

$1\frac{1}{3} \rightarrow \frac{4}{3}$

$\frac{4}{3}$ cups

(11) Batch #1 =

Blue	white	yellow
2	1.5	1
×3	×3	×3
6	4.5	3

✓

*Batch #4 =

*Batch #5

B	W	Y
2	1.5	1
×2	×2	×2
4	3	2

(12) 4 green + 4 blue + 4 yellow + 4 red = 16 in total

chance of getting red → $\frac{4}{16} = \frac{1}{4} = 0.25$
chance of getting green → $\frac{4}{16} = \frac{1}{4} = 0.25$
" " " blue → " " "
" " " yellow → " " "

} 0.25 = Expected Frequency

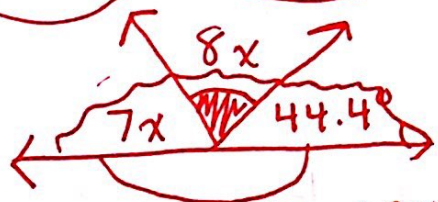
~7 Trials.

- Picked yellow 4 out of 7 trials → $\frac{4}{7} = 0.57142857\ldots$
- Picked blue 2 out of 7 trials → $\frac{2}{7} = 0.2857\ldots$
- Picked red 1 out of 7 trials → $\frac{1}{7} = 0.1428\ldots$
- Picked green 0 out of 7 trials = $\frac{0}{7} = 0$

★ 0.2857 is closest to 0.25
↓
Blue

★★ (b) Blue

(13)



∠ 180°

$7x + 8x + 44.4 = 180$

$15x + 44.4 = 180$
$-44.4 \quad -44.4$

$\frac{15x}{15} = \frac{135.6}{15}$

$x = 9.04$

* measure of shaded region = $8x$

$8x = 8 \cdot x$
$= 8 \cdot 9.04$
$= \boxed{72.32°}$ ★
★

(14) ⇒ Proportion!

$$\frac{\text{incorrect weight}}{\text{Total}} \rightarrow \boxed{\frac{5}{100} = \frac{x}{2000}}$$

cross multiply!

$$\frac{5}{100} \times \frac{x}{2000}$$

$$100 \cdot x = 5 \cdot 2000$$

$$\frac{100x}{100} = \frac{10{,}000}{100}$$

$$\boxed{x = 100}$$