6. A class contains 5 boys and 5 girls. They select seats at random around a circular table that seats 10. Find the probability that at least two girls will sit next to each other.

7. $\dfrac{1}{\dfrac{1}{\dfrac{1}{s-1}-1}-1}-1=1$ and $\dfrac{t+7}{7}=\dfrac{13}{8}$.

   Find the value of the product st.

8. Consider all positive integer solutions to $3x + 4y = 50$. What is the difference between the largest and smallest values of x that can occur?

9. Give the value of A where $2^A = (1+i)^{200} + (1-i)^{200}$

10. A house valued at \$90,000 in 1985 was sold for \$250,000 in 1998. Assuming that the value of the house was modeled during that period of time by the exponential function $y = ar^x$, give the value of r to the nearest hundredth.

Answers

1. 4
2. $6\pi + 12$
3. 586
4. 72
5. 31.5
6. 121/126
7. 7
8. 12
9. 101
10. 1.08.