

1. Write the 12th term in the expansion of $(x - 2y)^{17}$

2. $2x^2 - 8x + y^2 - 10y - 4 = 0$ Write in Standard Form

3. Find the probability that a 5-card hand dealt randomly, has 2 clubs and 3 diamonds.

4. In how many ways can a charm bracelet with 9 charms and no clasp be constructed?

5. $9x^2 + 36x + 4y^2 - 24y + 36 = 0$ Find all Foci.

6. Write the equation of an ellipse with vertices at $(-25, 8)$ and $(5, 8)$ and foci at $(-19, 8)$ and $(-1, 8)$.

7. $\mathbf{v} = \langle 3, 4, 6 \rangle$ $\mathbf{u} = \langle 1, 3, z \rangle$. \mathbf{v} is perpendicular to \mathbf{u} . Find z .

8. $7 + 10 + 13 + \dots + 865 =$

9. $\sum_{n=1}^{23} \left(\frac{1}{20}\right)(2)^n =$

10. $y^2 - 4y - 4x = 0$ Find all Foci

Answers:

1. $-25,346,948x^6y^{11}$

2. $\frac{(x-2)^2}{37/2} + \frac{(y-5)^2}{37} = 1$

3. $\frac{22308}{2598960} = 0.00858$

4. 20160

5. $(-2, 3 + \sqrt{5})$ & $(-2, 3 - \sqrt{5})$

6. $\frac{(x+10)^2}{225} + \frac{(y-8)^2}{144} = 1$

7. $z = -\frac{5}{2}$

8. 125,132

9. $8388860.7 = \frac{8388607}{10}$

10. (0, 2)