

Pascal's Triangle and Binomial Expansion Activity - Answers

Use a colored pencil or marker to color each of the following on separate Pascal's Triangles:

See Drawings

Use Pascal's Triangle and the Binomial Expansion Pattern to expand the following Binomials.

1. $x^2 + 8x + 16$

2. $x^3 - 12x^2 + 48x - 64$

3. $x^4 + 16x^3 + 96x^2 + 256x + 256$

4. $x^5 + 20x^4 + 160x^3 + 640x^2 + 1280x + 1024$

5. $8x^3 + 36x^2 + 54x + 27$

6. $16x^4 - 96x^3 + 216x^2 - 216x + 81$

7. $32x^5 + 240x^4 + 720x^3 + 1080x^2 + 810x + 243$

8. $8x^3 - 36x^2y + 54xy^2 - 27y^3$

9. $16x^4 + 96x^3y + 216x^2y^2 + 216xy^3 + 81y^4$

10. $243x^5 - 810x^4y + 1080x^3y^2 - 720x^2y^3 + 240xy^4 - 32y^5$

11. $64x^6 + 192x^5y + 240x^4y^2 + 160x^3y^3 + 60x^2y^4 + 12xy^5 + y^6$

12. $2187x^7 - 5103x^6y + 5103x^5y^2 - 2835x^4y^3 + 945x^3y^4 - 189x^2y^5 + 21xy^6 - y^7$

13. $x^8 - 16x^7y + 112x^6y^2 - 448x^5y^3 + 1120x^4y^4 - 1792x^3y^5 + 1792x^2y^6 - 1024xy^7 + 256y^8$

14. $x^{10} + 20x^9y + 180x^8y^2 + 960x^7y^3 + 3360x^6y^4 + 8064x^5y^5 + 13440x^4y^6 + 15360x^3y^7 + 11520x^2y^8 + 5120xy^9 + 1024y^{10}$