Polynomials and Sound

| Graph | Polynomial | Graph | Polynomial |
| --- | --- | --- | --- |
|  | *T*3(*x*) = 4*x*3 – 3*x* |  | *T*4(*x*) = 8*x*4 – 8*x*2 + 1 |
| A graph of a function  Description automatically generated | *T*5(*x*) = 16*x*5 – 20*x*3 + 5*x* | A graph of a function  Description automatically generated | *T*6(*x*) = 32*x*6 – 48*x*4 + 18*x*2 – 1 |
|  | *T*7(*x*) = 64*x*7 – 112*x*5 + 56*x*3 – 7*x* |  | *T*8(*x*) = 128*x*8 – 256*x*6 + 160*x*4 – 32*x*2 + 1 |
| A graph with green lines  Description automatically generated | *T*9(*x*) = 256*x*9 – 576*x*7 + 432*x*5 – 120*x*3 + 9*x* |  |  |

Use the table above to answer the following questions. Show your work on a separate sheet of paper.

**1)** Find *T*3(x) + *T*5(*x*).

**3)** Find *T*8(*x*) – *T*6(*x*).

**2)** Find the difference: *T*4(*x*) – *T*6(*x*).

**4)** Find the sum of *T*9(*x*) + *T*7(*x*).

# Web Tool

To use the web tool and hear your polynomial, follow the steps below.

**1)** Go to [k20center.ou.edu/e-learning/polynomials-sound/](https://k20center.ou.edu/e-learning/polynomials-sound/).

**2)** Turn down the ***Effect Volume***.

**3)** Turn up the ***Noeffect Volume***.

**4)** Select a “Sample #.”

**5)** Press the “Start” button.

**6)** Enter the new polynomial.

* Click on each coefficient or exponent to edit its value.

**7)** Turn down the ***Noeffect volume***.

**8)** Turn up the ***Effect volume***.