

## Beginner 1

Solution: Best overall score is 0.

**Hole 1:**  $1, 2, 3 \implies 4$

Best score is 0:

$$(3 + 2) - 1 = 4$$

$$2 \times (3 - 1) = 4$$

Other close equations:

$$3 + (2 \times 1) = 5$$

$$2 + (3 \times 1) = 5$$

$$(3 \times 2) - 1 = 5$$

$$1 \times (3 + 2) = 5$$

$$3 \times (2 - 1) = 3$$

**Hole 2:**  $1, 1, 4 \implies 2$

Best score is 0:

$$(4 - 1) - 1 = 2$$

Other close equations:

$$(4 \times 1) - 1 = 3$$

$$1 \times (4 - 1) = 3$$

$$4 - (1 \times 1) = 3$$

$$(1 \times 1) \times 4 = 4$$

$$(4 + 1) - 1 = 4$$

**Hole 3:**  $2, 3, 6 \implies 5$

Best score is 0:

$$(6 + 2) - 3 = 5$$

Other close equations:

$$6 \times (3 - 2) = 6$$

$$2 \times (6 - 3) = 6$$

$$(6 + 3) - 2 = 7$$

## Beginner 2

Solution: Best overall score is 0.

**Hole 1:**  $1, 5, 6 \implies 12$

Best score is 0:

$$(1 + 5) + 6 = 12$$

Other close equations:

$$6 + (5 \times 1) = 11$$

$$5 + (6 \times 1) = 11$$

$$1 \times (6 + 5) = 11$$

$$(6 + 5) - 1 = 10$$

**Hole 2:**  $2, 4, 4 \implies 2$

Best score is 0:

$$(4 + 2) - 4 = 2$$

Other close equations:

$$(4 \times 2) - 4 = 4$$

$$2 \times (4 - 4) = 0$$

**Hole 3:**  $3, 3, 6 \implies 0$

Best score is 0:

$$(3 + 3) - 6 = 0$$

$$6 \times (3 - 3) = 0$$

$$(6 - 3) - 3 = 0$$

## Beginner 3

Solution: Best overall score is 0.

**Hole 1:**  $2, 5, 6 \implies 9$

Best score is 0:

$$(6 + 5) - 2 = 9$$

Other close equations:

$$(6 \times 2) - 5 = 7$$

**Hole 2:**  $2, 5, 6 \implies 3$

Best score is 0:

$$(6 + 2) - 5 = 3$$

Other close equations:

$$(5 \times 2) - 6 = 4$$

$$2 \times (6 - 5) = 2$$

$$(5 + 2) - 6 = 1$$

**Hole 3:**  $2, 5, 6 \implies 1$

Best score is 0:

$$(5 + 2) - 6 = 1$$

Other close equations:

$$2 \times (6 - 5) = 2$$

$$(6 + 2) - 5 = 3$$

$$(6 - 2) - 5 = -1$$

$$(6 - 5) - 2 = -1$$

## Beginner 4

Solution: Best overall score is 0.

**Hole 1:**  $3, 5, 5 \implies 3$

Best score is 0:

$$(5 + 3) - 5 = 3$$

**Hole 2:**  $3, 4, 6 \implies 7$

Best score is 0:

$$(6 + 4) - 3 = 7$$

Other close equations:

$$(4 \times 3) - 6 = 6$$

$$6 \times (4 - 3) = 6$$

$$3 \times (6 - 4) = 6$$

$$(6 + 3) - 4 = 5$$

**Hole 3:**  $4, 5, 6 \implies 15$

Best score is 0:

$$(4 + 5) + 6 = 15$$

Other close equations:

$$(5 \times 4) - 6 = 14$$

## Beginner 5

Solution: Best overall score is 0.

**Hole 1:**  $3, 4, 5 \implies 12$

Best score is 0:

$$(3 + 4) + 5 = 12$$

Other close equations:

$$(5 \times 3) - 4 = 11$$

**Hole 2:**  $2, 3, 4 \implies 3$

Best score is 0:

$$(4 + 2) - 3 = 3$$

Other close equations:

$$(3 \times 2) - 4 = 2$$

$$4 \times (3 - 2) = 4$$

$$2 \times (4 - 3) = 2$$

$$(4 \times 2) - 3 = 5$$

$$(3 + 2) - 4 = 1$$

**Hole 3:**  $1, 2, 4 \implies 8$

Best score is 0:

$$(1 \times 2) \times 4 = 8$$

Other close equations:

$$(1 + 2) + 4 = 7$$

$$1 + (4 \times 2) = 9$$

$$(4 \times 2) - 1 = 7$$

$$4 + (2 \times 1) = 6$$

$$2 + (4 \times 1) = 6$$

## Beginner 6

Solution: Best overall score is 0.

**Hole 1:**  $1, 1, 4 \implies 5$

Best score is 0:

$$4 + (1 \times 1) = 5$$

$$1 + (4 \times 1) = 5$$

$$1 \times (4 + 1) = 5$$

Other close equations:

$$(1 \times 1) \times 4 = 4$$

$$(1 + 1) + 4 = 6$$

$$(4 + 1) - 1 = 4$$

$$(4 \times 1) - 1 = 3$$

$$1 \times (4 - 1) = 3$$

**Hole 2:**  $2, 3, 3 \implies 9$

Best score is 0:

$$3 + (3 \times 2) = 9$$

Other close equations:

$$(2 + 3) + 3 = 8$$

$$2 + (3 \times 3) = 11$$

$$(3 \times 3) - 2 = 7$$

**Hole 3:**  $2, 4, 6 \implies 2$

Best score is 0:

$$(4 \times 2) - 6 = 2$$

Other close equations:

$$(4 + 2) - 6 = 0$$

$$(6 + 2) - 4 = 4$$

$$(6 - 2) - 4 = 0$$

$$2 \times (6 - 4) = 4$$

$$(6 - 4) - 2 = 0$$

## Beginner 7

Solution: Best overall score is 0.

**Hole 1:**  $1, 3, 5 \implies 10$

Best score is 0:

$$5 \times (3 - 1) = 10$$

Other close equations:

$$(1 + 3) + 5 = 9$$

$$5 + (3 \times 1) = 8$$

$$3 + (5 \times 1) = 8$$

$$1 \times (5 + 3) = 8$$

$$3 \times (5 - 1) = 12$$

**Hole 2:**  $1, 3, 5 \implies 15$

Best score is 0:

$$(1 \times 3) \times 5 = 15$$

Other close equations:

$$1 + (5 \times 3) = 16$$

$$(5 \times 3) - 1 = 14$$

**Hole 3:**  $1, 3, 5 \implies 20$

Best score is 0:

$$5 \times (3 + 1) = 20$$

Other close equations:

$$3 \times (5 + 1) = 18$$

## Beginner 8

Solution: Best overall score is 0.

**Hole 1:**  $2, 3, 5 \implies 13$

Best score is 0:

$$3 + (5 \times 2) = 13$$

$$(5 \times 3) - 2 = 13$$

Other close equations:

$$5 + (3 \times 2) = 11$$

$$(2 + 3) + 5 = 10$$

$$2 \times (5 + 3) = 16$$

$$2 + (5 \times 3) = 17$$

$$3 \times (5 - 2) = 9$$

**Hole 2:**  $2, 5, 5 \implies 15$

Best score is 0:

$$5 + (5 \times 2) = 15$$

$$5 \times (5 - 2) = 15$$

Other close equations:

$$(2 + 5) + 5 = 12$$

**Hole 3:**  $2, 4, 6 \implies 16$

Best score is 0:

$$4 + (6 \times 2) = 16$$

$$4 \times (6 - 2) = 16$$

Other close equations:

$$6 + (4 \times 2) = 14$$

$$(2 + 4) + 6 = 12$$

$$2 \times (6 + 4) = 20$$

$$6 \times (4 - 2) = 12$$

## Beginner 9

Solution: Best overall score is 1.

**Hole 1:**  $1, 2, 4 \implies 9$

Best score is 0:

$$1 + (4 \times 2) = 9$$

Other close equations:

$$(1 \times 2) \times 4 = 8$$

$$2 \times (4 + 1) = 10$$

$$(1 + 2) + 4 = 7$$

$$(4 \times 2) - 1 = 7$$

**Hole 2:**  $2, 3, 5 \implies 9$

Best score is 0:

$$3 \times (5 - 2) = 9$$

Other close equations:

$$(2 + 3) + 5 = 10$$

$$5 + (3 \times 2) = 11$$

$$(5 \times 2) - 3 = 7$$

**Hole 3:**  $2, 2, 2 \implies 9$

Best score is 1:

$$(2 \times 2) \times 2 = 8$$

$$2 \times (2 + 2) = 8$$

Other close equations:

$$2 + (2 \times 2) = 6$$

$$(2 + 2) + 2 = 6$$

## Beginner 10

Solution: Best overall score is 1.

**Hole 1:**  $1, 2, 4 \implies 6$

Best score is 0:

$$4 + (2 \times 1) = 6$$

$$2 + (4 \times 1) = 6$$

$$1 \times (4 + 2) = 6$$

$$2 \times (4 - 1) = 6$$

Other close equations:

$$(1 + 2) + 4 = 7$$

$$(4 \times 2) - 1 = 7$$

$$(4 + 2) - 1 = 5$$

$$(1 \times 2) \times 4 = 8$$

$$4 \times (2 - 1) = 4$$

**Hole 2:**  $1, 2, 5 \implies 12$

Best score is 0:

$$2 \times (5 + 1) = 12$$

Other close equations:

$$1 + (5 \times 2) = 11$$

$$(1 \times 2) \times 5 = 10$$

**Hole 3:**  $1, 2, 6 \implies 15$

Best score is 1:

$$2 \times (6 + 1) = 14$$

Other close equations:

$$1 + (6 \times 2) = 13$$

$$(1 \times 2) \times 6 = 12$$

$$6 \times (2 + 1) = 18$$

## Beginner 11

Solution: Best overall score is 2.

**Hole 1:**  $1, 1, 3 \implies 7$

Best score is 1:

$$3 \times (1 + 1) = 6$$

Other close equations:

$$(1 + 1) + 3 = 5$$

$$3 + (1 \times 1) = 4$$

$$1 + (3 \times 1) = 4$$

$$1 \times (3 + 1) = 4$$

**Hole 2:**  $2, 3, 4 \implies 10$

Best score is 0:

$$4 + (3 \times 2) = 10$$

$$(4 \times 3) - 2 = 10$$

Other close equations:

$$3 + (4 \times 2) = 11$$

$$(2 + 3) + 4 = 9$$

**Hole 3:**  $2, 2, 2 \implies 5$

Best score is 1:

$$2 + (2 \times 2) = 6$$

$$(2 + 2) + 2 = 6$$

Other close equations:

$$(2 \times 2) \times 2 = 8$$

$$(2 \times 2) - 2 = 2$$

$$2 \times (2 + 2) = 8$$

$$(2 + 2) - 2 = 2$$

## Beginner 12

Solution: Best overall score is 0.

**Hole 1:**  $2, 4, 5 \implies 12$

Best score is 0:

$$4 \times (5 - 2) = 12$$

Other close equations:

$$5 + (4 \times 2) = 13$$

$$(2 + 4) + 5 = 11$$

$$4 + (5 \times 2) = 14$$

$$5 \times (4 - 2) = 10$$

**Hole 2:**  $2, 4, 5 \implies 13$

Best score is 0:

$$5 + (4 \times 2) = 13$$

Other close equations:

$$4 + (5 \times 2) = 14$$

$$4 \times (5 - 2) = 12$$

$$(2 + 4) + 5 = 11$$

**Hole 3:**  $2, 4, 5 \implies 14$

Best score is 0:

$$4 + (5 \times 2) = 14$$

Other close equations:

$$5 + (4 \times 2) = 13$$

$$4 \times (5 - 2) = 12$$

## Intermediate 1

**Solution: Best overall score is 0.**

**Hole 1:**  $1, 4, 6 \implies 18$

**Best score is 0:**

$$6 \times (4 - 1) = 18$$

**Other close equations:**

$$4 \times (6 - 1) = 20$$

**Hole 2:**  $1, 4, 6 \implies 20$

**Best score is 0:**

$$4 \times (6 - 1) = 20$$

**Other close equations:**

$$6 \times (4 - 1) = 18$$

$$(6 \times 4) - 1 = 23$$

$$(1 \times 4) \times 6 = 24$$

$$(6 \times 4) \div 1 = 24$$

**Hole 3:**  $1, 4, 6 \implies 28$

**Best score is 0:**

$$4 \times (6 + 1) = 28$$

**Other close equations:**

$$6 \times (4 + 1) = 30$$

$$1 + (6 \times 4) = 25$$

$$(1 \times 4) \times 6 = 24$$

$$(6 \times 4) \div 1 = 24$$

## Intermediate 2

**Solution: Best overall score is 0.**

**Hole 1:**  $1, 4, 5 \implies 24$

**Best score is 0:**

$$4 \times (5 + 1) = 24$$

**Other close equations:**

$$5 \times (4 + 1) = 25$$

$$1 + (5 \times 4) = 21$$

$$(1 \times 4) \times 5 = 20$$

$$(5 \times 4) \div 1 = 20$$

$$(5 \times 4) - 1 = 19$$

**Hole 2:**  $1, 5, 6 \implies 35$

**Best score is 0:**

$$5 \times (6 + 1) = 35$$

**Other close equations:**

$$6 \times (5 + 1) = 36$$

$$1 + (6 \times 5) = 31$$

$$(1 \times 5) \times 6 = 30$$

$$(6 \times 5) \div 1 = 30$$

$$(6 \times 5) - 1 = 29$$

**Hole 3:**  $4, 5, 6 \implies 44$

**Best score is 0:**

$$4 \times (6 + 5) = 44$$

**Other close equations:**

$$5 \times (6 + 4) = 50$$

## Intermediate 3

Solution: Best overall score is 1.

**Hole 1:**  $2, 2, 5 \implies 14$

Best score is 0:

$$2 \times (5 + 2) = 14$$

Other close equations:

$$2 + (5 \times 2) = 12$$

**Hole 2:**  $3, 3, 5 \implies 14$

Best score is 0:

$$5 + (3 \times 3) = 14$$

Other close equations:

$$(5 \times 3) - 3 = 12$$

$$(3 + 3) + 5 = 11$$

**Hole 3:**  $4, 4, 5 \implies 14$

Best score is 1:

$$(4 + 4) + 5 = 13$$

Other close equations:

$$(5 \times 4) - 4 = 16$$

$$(4 \times 4) - 5 = 11$$

## Intermediate 4

Solution: Best overall score is 2.

**Hole 1:**  $2, 3, 5 \implies 15$

Best score is 1:

$$2 \times (5 + 3) = 16$$

Other close equations:

$$3 + (5 \times 2) = 13$$

$$2 + (5 \times 3) = 17$$

$$(5 \times 3) - 2 = 13$$

**Hole 2:**  $3, 4, 6 \implies 15$

Best score is 1:

$$(6 \times 3) - 4 = 14$$

Other close equations:

$$(3 + 4) + 6 = 13$$

$$6 + (4 \times 3) = 18$$

$$4 \times (6 - 3) = 12$$

**Hole 3:**  $3, 5, 6 \implies 15$

Best score is 0:

$$5 \times (6 - 3) = 15$$

Other close equations:

$$(3 + 5) + 6 = 14$$

$$(6 \times 3) - 5 = 13$$



## Intermediate 5

**Solution: Best overall score is approx. 2.3333.**

**Hole 1:**  $2, 3, 6 \implies 3$

Best score is approx. 0.3333:

$$(6 + 2) \div 3 \approx 2.6667$$

$$3 - (2 \div 6) \approx 2.6667$$

$$3 + (2 \div 6) \approx 3.3333$$

**Other close equations:**

$$2 + (3 \div 6) = 2.5$$

$$(6 \times 2) \div 3 = 4$$

$$2 + (6 \div 3) = 4$$

$$(6 + 3) \div 2 = 4.5$$

$$(6 - 3) \div 2 = 1.5$$

**Hole 2:**  $2, 3, 6 \implies 18$

Best score is 0:

$$2 \times (6 + 3) = 18$$

**Other close equations:**

$$2 + (6 \times 3) = 20$$

$$(6 \times 3) - 2 = 16$$

$$3 + (6 \times 2) = 15$$

**Hole 3:**  $2, 3, 6 \implies 32$

Best score is 2:

$$6 \times (3 + 2) = 30$$

**Other close equations:**

$$(2 \times 3) \times 6 = 36$$

## Intermediate 6

**Solution: Best overall score is 2.**

**Hole 1:**  $3, 3, 5 \implies 15$

Best score is 1:

$$5 + (3 \times 3) = 14$$

**Other close equations:**

$$3 + (5 \times 3) = 18$$

$$(5 \times 3) - 3 = 12$$

**Hole 2:**  $4, 5, 5 \implies 15$

Best score is 0:

$$(5 \times 4) - 5 = 15$$

**Other close equations:**

$$(4 + 5) + 5 = 14$$

**Hole 3:**  $3, 4, 4 \implies 15$

Best score is 1:

$$4 + (4 \times 3) = 16$$

**Other close equations:**

$$(4 \times 4) - 3 = 13$$

## Intermediate 7

**Solution: Best overall score is 3.**

**Hole 1:**  $2, 4, 6 \implies 19$

**Best score is 1:**

$$2 \times (6 + 4) = 20$$

**Other close equations:**

$$4 + (6 \times 2) = 16$$

$$(6 \times 4) - 2 = 22$$

$$4 \times (6 - 2) = 16$$

**Hole 2:**  $2, 5, 6 \implies 20$

**Best score is 0:**

$$5 \times (6 - 2) = 20$$

**Other close equations:**

$$2 \times (6 + 5) = 22$$

$$6 \times (5 - 2) = 18$$

$$5 + (6 \times 2) = 17$$

**Hole 3:**  $3, 4, 4 \implies 21$

**Best score is 2:**

$$3 + (4 \times 4) = 19$$

**Other close equations:**

$$3 \times (4 + 4) = 24$$

$$4 + (4 \times 3) = 16$$

## Intermediate 8

**Solution: Best overall score is 6.**

**Hole 1:**  $2, 3, 4 \implies 10$

**Best score is 0:**

$$4 + (3 \times 2) = 10$$

$$(4 \times 3) - 2 = 10$$

**Other close equations:**

$$3 + (4 \times 2) = 11$$

$$(2 + 3) + 4 = 9$$

**Hole 2:**  $2, 3, 4 \implies 20$

**Best score is 0:**

$$4 \times (3 + 2) = 20$$

**Other close equations:**

$$3 \times (4 + 2) = 18$$

**Hole 3:**  $2, 3, 4 \implies 30$

**Best score is 6:**

$$(2 \times 3) \times 4 = 24$$

## Intermediate 9

Solution: Best overall score is 1.

**Hole 1:** 2, 3, 5  $\implies$  9

Best score is 0:

$$3 \times (5 - 2) = 9$$

Other close equations:

$$(2 + 3) + 5 = 10$$

$$(5 \times 3) \div 2 = 7.5$$

$$5 + (3 \times 2) = 11$$

$$(5 \times 2) - 3 = 7$$

$$5 + (3 \div 2) = 6.5$$

**Hole 2:** 2, 5, 6  $\implies$  8

Best score is 0:

$$5 + (6 \div 2) = 8$$

Other close equations:

$$6 + (5 \div 2) = 8.5$$

$$(6 \times 2) - 5 = 7$$

$$(6 + 5) - 2 = 9$$

$$6 + (2 \div 5) = 6.4$$

$$6 - (2 \div 5) = 5.6$$

**Hole 3:** 2, 3, 4  $\implies$  7

Best score is 1:

$$(4 \times 3) \div 2 = 6$$

$$3 \times (4 - 2) = 6$$

Other close equations:

$$4 + (3 \div 2) = 5.5$$

$$(4 \times 2) - 3 = 5$$

$$(2 + 3) + 4 = 9$$

$$(4 + 3) - 2 = 5$$

$$3 + (4 \div 2) = 5$$

## Intermediate 10

Solution: Best overall score is 3.

**Hole 1:** 2, 2, 6  $\implies$  8

Best score is 0:

$$2 \times (6 - 2) = 8$$

Other close equations:

$$6 + (2 \div 2) = 7$$

$$6 + (2 \times 2) = 10$$

$$(6 \times 2) - 2 = 10$$

$$(6 \times 2) \div 2 = 6$$

$$(2 + 2) + 6 = 10$$

**Hole 2:** 2, 4, 5  $\implies$  8

Best score is 1:

$$(5 + 4) - 2 = 7$$

$$5 + (4 \div 2) = 7$$

Other close equations:

$$4 + (5 \div 2) = 6.5$$

$$(5 \times 2) - 4 = 6$$

$$(5 \times 4) \div 2 = 10$$

$$5 \times (4 - 2) = 10$$

$$5 + (2 \div 4) = 5.5$$

**Hole 3:** 3, 3, 5  $\implies$  8

Best score is 2:

$$5 + (3 \div 3) = 6$$

$$3 \times (5 - 3) = 6$$

Other close equations:

$$(5 \times 3) \div 3 = 5$$

$$(3 + 3) + 5 = 11$$

$$(5 + 3) - 3 = 5$$

$$3 + (5 \div 3) \approx 4.6667$$

$$(3 \times 3) - 5 = 4$$

## Intermediate 11

Solution: Best overall score is 3.

**Hole 1:** 1, 4, 5  $\implies$  23

Best score is 1:

$$4 \times (5 + 1) = 24$$

Other close equations:

$$5 \times (4 + 1) = 25$$

$$1 + (5 \times 4) = 21$$

$$(1 \times 4) \times 5 = 20$$

$$(5 \times 4) \div 1 = 20$$

$$(5 \times 4) - 1 = 19$$

**Hole 2:** 1, 5, 6  $\implies$  34

Best score is 1:

$$5 \times (6 + 1) = 35$$

Other close equations:

$$6 \times (5 + 1) = 36$$

$$1 + (6 \times 5) = 31$$

$$(1 \times 5) \times 6 = 30$$

$$(6 \times 5) \div 1 = 30$$

$$(6 \times 5) - 1 = 29$$

**Hole 3:** 4, 5, 6  $\implies$  45

Best score is 1:

$$4 \times (6 + 5) = 44$$

Other close equations:

$$5 \times (6 + 4) = 50$$

## Intermediate 12

Solution: Best overall score is 2.

**Hole 1:** 3, 4, 6  $\implies$  9

Best score is 1:

$$(6 \times 4) \div 3 = 8$$

Other close equations:

$$6 + (4 \div 3) \approx 7.3333$$

$$(6 + 4) - 3 = 7$$

$$6 + (3 \div 4) = 6.75$$

$$(4 \times 3) - 6 = 6$$

$$6 \times (4 - 3) = 6$$

**Hole 2:** 4, 5, 6  $\implies$  9

Best score is 1:

$$5 \times (6 - 4) = 10$$

Other close equations:

$$(6 \times 5) \div 4 = 7.5$$

$$6 + (5 \div 4) = 7.25$$

$$(6 + 5) - 4 = 7$$

$$6 + (4 \div 5) = 6.8$$

$$5 + (6 \div 4) = 6.5$$

**Hole 3:** 4, 6, 6  $\implies$  9

Best score is 0:

$$(6 \times 6) \div 4 = 9$$

Other close equations:

$$(6 + 6) - 4 = 8$$

$$6 + (6 \div 4) = 7.5$$

$$6 + (4 \div 6) \approx 6.6667$$

## Advanced 1

Solution: Best overall score is 0.

**Hole 1:**  $1, 2, 3 \implies 10$

Best score is 0:

$$1 + (3^2) = 10$$

Other close equations:

$$(3 \times 1)^2 = 9$$

$$3 \times (2 + 1) = 9$$

$$1 + (2^3) = 9$$

$$1 \times (3^2) = 9$$

$$(3^2) \div 1 = 9$$

**Hole 2:**  $1, 2, 3 \implies 16$

Best score is 0:

$$(3 + 1)^2 = 16$$

$$2^{(3+1)} = 16$$

**Hole 2:**  $2, 3, 4 \implies 13$

Best score is 0:

$$(2^4) - 3 = 13$$

$$4 + (3^2) = 13$$

$$(4^2) - 3 = 13$$

Other close equations:

$$4 + (2^3) = 12$$

$$2 + (4 \times 3) = 14$$

$$2 \times (4 + 3) = 14$$

$$3 + (4 \times 2) = 11$$

$$4 + (3 \times 2) = 10$$

**Hole 3:**  $1, 2, 3 \implies 27$

Best score is 0:

$$3^{(2+1)} = 27$$

**Hole 3:**  $1, 3, 5 \implies 25$

Best score is 0:

$$5^{(3-1)} = 25$$

Other close equations:

$$5 \times (3 + 1) = 20$$

## Advanced 2

Solution: Best overall score is 0.

**Hole 1:**  $1, 2, 6 \implies 37$

Best score is 0:

$$1 + (6^2) = 37$$

Other close equations:

$$(6 \times 1)^2 = 36$$

$$1 \times (6^2) = 36$$

$$(6^2) \div 1 = 36$$

$$(6 \div 1)^2 = 36$$

$$6^{(2 \times 1)} = 36$$

## Advanced 3

Solution: Best overall score is 3.

**Hole 1:** 1, 4, 5  $\implies$  23

Best score is 1:

$$4 \times (5 + 1) = 24$$

Other close equations:

$$5 \times (4 + 1) = 25$$

$$1 + (5 \times 4) = 21$$

$$(1 \times 4) \times 5 = 20$$

$$(5 \times 4)^1 = 20$$

$$(5 \times 4) \div 1 = 20$$

**Hole 2:** 2, 2, 4  $\implies$  33

Best score is 1:

$$2 \times (2^4) = 32$$

$$2 \times (4^2) = 32$$

Other close equations:

$$(4 + 2)^2 = 36$$

**Hole 3:** 4, 5, 6  $\implies$  43

Best score is 1:

$$4 \times (6 + 5) = 44$$

## Advanced 4

Solution: Best overall score is 3.

**Hole 1:** 2, 4, 5  $\implies$  29

Best score is 0:

$$4 + (5^2) = 29$$

Other close equations:

$$(2^5) - 4 = 28$$

$$5 \times (4 + 2) = 30$$

$$4 \times (5 + 2) = 28$$

**Hole 2:** 3, 4, 5  $\implies$  29

Best score is 2:

$$3 \times (5 + 4) = 27$$

Other close equations:

$$(5^3) \div 4 = 31.25$$

$$4 \times (5 + 3) = 32$$

**Hole 3:** 4, 4, 6  $\implies$  29

Best score is 1:

$$4 + (6 \times 4) = 28$$

## Advanced 5

Solution: Best overall score is 2.

**Hole 1:**  $2, 5, 5 \implies 30$

Best score is 0:

$$5 + (5^2) = 30$$

Other close equations:

$$(2^5) - 5 = 27$$

$$2 + (5 \times 5) = 27$$

**Hole 2:**  $3, 6, 6 \implies 20$

Best score is 2:

$$6 \times (6 - 3) = 18$$

Other close equations:

$$6 + (6 \times 3) = 24$$

$$(3 + 6) + 6 = 15$$

**Hole 3:**  $3, 5, 6 \implies 10$

Best score is 0:

$$(6 \times 5) \div 3 = 10$$

Other close equations:

$$(5 \times 3) - 6 = 9$$

$$(6 + 5) - 3 = 8$$

$$6 \times (5 - 3) = 12$$

$$6 + (5 \div 3) \approx 7.6667$$

$$(6 \times 3) - 5 = 13$$

## Advanced 6

Solution: Best overall score is 3.

**Hole 1:**  $2, 3, 4 \implies 36$

Best score is 0:

$$4 \times (3^2) = 36$$

Other close equations:

$$4 \times (2^3) = 32$$

$$(4^3) \div 2 = 32$$

$$(3^4) \div 2 = 40.5$$

**Hole 2:**  $2, 3, 5 \implies 37$

Best score is 2:

$$3 + (2^5) = 35$$

Other close equations:

$$5 \times (2^3) = 40$$

**Hole 3:**  $2, 3, 6 \implies 38$

Best score is 1:

$$3 + (6^2) = 39$$

Other close equations:

$$(2 \times 3) \times 6 = 36$$

$$(6^2) - 3 = 33$$

## Advanced 7

Solution: Best overall score is 8.

**Hole 1:** 2, 3, 4  $\implies$  50

Best score is 1:

$$(4 + 3)^2 = 49$$

Other close equations:

$$3 \times (2^4) = 48$$

$$3 \times (4^2) = 48$$

**Hole 2:** 2, 3, 5  $\implies$  50

Best score is 5:

$$5 \times (3^2) = 45$$

Other close equations:

$$5 \times (2^3) = 40$$

**Hole 3:** 2, 3, 6  $\implies$  50

Best score is 2:

$$6 \times (2^3) = 48$$

Other close equations:

$$6 \times (3^2) = 54$$

## Advanced 8

Solution: Best overall score is 2.

**Hole 1:** 1, 2, 3  $\implies$  15

Best score is 1:

$$(3 + 1)^2 = 16$$

$$2^{(3+1)} = 16$$

**Hole 2:** 2, 5, 6  $\implies$  15

Best score is 0:

$$(6 \times 5) \div 2 = 15$$

Other close equations:

$$6 + (5 \times 2) = 16$$

$$5 + (6 \times 2) = 17$$

$$(2 + 5) + 6 = 13$$

$$(2^6) \div 5 = 12.8$$

**Hole 3:** 3, 4, 5  $\implies$  15

Best score is 1:

$$(3 - 5)^4 = 16$$

$$(5 - 3)^4 = 16$$

$$4^{(5-3)} = 16$$

Other close equations:

$$(3^4) \div 5 = 16.2$$

$$5 + (4 \times 3) = 17$$

$$(5 \times 4) - 3 = 17$$

$$(4^3) \div 5 = 12.8$$

$$(3 + 4) + 5 = 12$$



## Advanced 9

Solution: Best overall score is 5.

**Hole 1:**  $2, 3, 5 \implies 33$

Best score is 2:

$$3 + (2^5) = 35$$

Other close equations:

$$(2 \times 3) \times 5 = 30$$

$$(2^5) - 3 = 29$$

**Hole 2:**  $2, 4, 5 \implies 33$

Best score is 1:

$$(4 - 2)^5 = 32$$

$$(4 \div 2)^5 = 32$$

$$4^{(5 \div 2)} = 32$$

Other close equations:

$$4 + (2^5) = 36$$

$$5 \times (4 + 2) = 30$$

**Hole 3:**  $2, 5, 5 \implies 33$

Best score is 2:

$$5 \times (5 + 2) = 35$$

Other close equations:

$$5 + (5^2) = 30$$

$$5 + (2^5) = 37$$

## Advanced 10

Solution: Best overall score is 5.

**Hole 1:**  $2, 3, 3 \implies 27$

Best score is 0:

$$3 \times (3^2) = 27$$

Other close equations:

$$2 + (3^3) = 29$$

$$(3^3) - 2 = 25$$

$$3 \times (2^3) = 24$$

**Hole 2:**  $2, 3, 3 \implies 33$

Best score is 3:

$$(3 + 3)^2 = 36$$

Other close equations:

$$2 + (3^3) = 29$$

$$3 \times (3^2) = 27$$

$$(3^3) - 2 = 25$$

$$3 \times (2^3) = 24$$

**Hole 3:**  $2, 3, 3 \implies 56$

Best score is 2:

$$2 \times (3^3) = 54$$

Other close equations:

$$2^{(3+3)} = 64$$

## Advanced 11

Solution: Best overall score is 3.

**Hole 1:** 2, 4, 5  $\implies$  21

Best score is 0:

$$5 + (2^4) = 21$$

$$5 + (4^2) = 21$$

$$(5^2) - 4 = 21$$

Other close equations:

$$2 + (5 \times 4) = 22$$

**Hole 2:** 2, 4, 5  $\implies$  27

Best score is 1:

$$(2^5) - 4 = 28$$

$$4 \times (5 + 2) = 28$$

Other close equations:

$$4 + (5^2) = 29$$

$$5^{(4-2)} = 25$$

$$5^{(4 \div 2)} = 25$$

$$5 \times (4 + 2) = 30$$

**Hole 3:** 2, 4, 5  $\implies$  34

Best score is 2:

$$(4 - 2)^5 = 32$$

$$(4 \div 2)^5 = 32$$

$$4^{(5 \div 2)} = 32$$

$$4 + (2^5) = 36$$

Other close equations:

$$5 \times (4 + 2) = 30$$

## Advanced 12

Solution: Best overall score is 5.

**Hole 1:** 2, 2, 5  $\implies$  99

Best score is 1:

$$(5 \times 2)^2 = 100$$

Other close equations:

$$2^{(5+2)} = 128$$

$$2 \times (2^5) = 64$$

**Hole 2:** 2, 3, 5  $\implies$  99

Best score is 3:

$$3 \times (2^5) = 96$$

Other close equations:

$$(3^5) \div 2 = 121.5$$

$$3 \times (5^2) = 75$$

$$(5^3) - 2 = 123$$

$$2 + (5^3) = 127$$

$$(5 + 3)^2 = 64$$

**Hole 3:** 2, 4, 5  $\implies$  99

Best score is 1:

$$4 \times (5^2) = 100$$

Other close equations:

$$(2 - 5)^4 = 81$$

$$(5 + 4)^2 = 81$$

$$(5 - 2)^4 = 81$$

$$5 \times (2^4) = 80$$

$$5 \times (4^2) = 80$$