

Virtual Stem School

Sample Paper

Question No: 1 - Please choose one

What is the sum of the sequence $2 + 4 + 6 + \dots + 26$?

- ▶ 56
- ▶ 91
- ▶ 132
- ▶ 182

Question No: 2 - Please choose one

what is the value of $(8 \times 4 + 2) - (8 + 4 \times 2)$

- ▶ 16
- ▶ 18
- ▶ 40
- ▶ 32

Question No: 3 - Please choose one

Calculate $9 + 8 \times (7 + 6) + (5 - 4) \times 3 - 2 \times 1$

- ▶ 114
- ▶ 104
- ▶ 113
- ▶ 130

Question No: 4 - Please choose one

Calculate $1 - (2 - (3 - (4 - (5 - (6 - (7 - (8 - (9 - 10))))))))?)$

- ▶ 10
- ▶ 5
- ▶ -5
- ▶ -10

Question No: 5 - Please choose one

Find $-2(4-6)+12-(-4(6-2))-16-(-6(2-4))$.

- ▶ 4
- ▶ 2
- ▶ -2
- ▶ -4

Question No: 6 - Please choose one

Dave is making a large rectangular block of black stone on a moon of Jupiter. He has 25 tons of stone with him. However, he needs to repay two loans, one of 6 tons of stone and another of 4 tons. The building company Dave is working with has 40 tons of stone they can give him on a spaceship, but the computer system malfunctioned, and it released 14 tons of the rock into space where it was lost. After Dave receives the remaining stone on the ship and repays his loans, how many tons of stone will he have left to make his block out of?

- ▶ 41
- ▶ 40
- ▶ 39
- ▶ 38

Question No: 7 - Please choose one

Simplify

$$\left(\left((42 \div 7) \div \frac{1}{8} \right) \div 12 \right) \div \frac{1}{8}$$

▶ 24

▶ 28

▶ 32

▶ 36

Question No: 8 - Please choose one

What is

$$5^2 - (3^2 - 4)^2$$

▶ 5

▶ 0

▶ -5

▶ 16

Question No: 9 - Please choose one

What is

$$(-1)^{1001}$$

▶ -1

▶ 0

▶ 1001

▶ 1

Question No: 10 - Please choose one

Find

$$1^{234} + 4^6 \div 4^4$$

- ▶ 15
- ▶ 16
- ▶ 17
- ▶ 18

Question No: 11 - Please choose one

calculate

$$36^{10} \div 6^{19}$$

- ▶ 6
- ▶ 36
- ▶ 36^{10}
- ▶ 6^9

Question No: 12 - Please choose one

Calculate

$$0^5 + (-1)^4$$

▶ -1

▶ 0

▶ 4

▶ 1

Question No: 13 - Please choose one

What is

$$2^{16} \div 16^2$$

▶ 64

▶ 128

▶ 256

▶ 512

Question No: 14 - Please choose one

Evaluate

$$5 \cdot 11^2 - 3(2^4 - 4 \div 2 \cdot 3)$$

▶ 575

▶ 555

▶ 475

▶ 450