Exercise Set 1 (No Calculator)

1

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

2

When 14 is subtracted from 6 times a number, 40 is left. What is half the number?

3

Four consecutive even numbers have a sum of 76. What is the greatest of these numbers?

4

If $\frac{5x}{2}+3=7$, then $10x+12=$

5

What number decreased by 7 equals the opposite of five times the number?

6

If $5d+12=24$, then $5d-12=$

7

If $\frac{2y^2}{5}=y^2$, then $y+5=$

8

The product of x and y is 36. If both x and y are integers, then what is the least possible value of $x-y$?

A) -37

B) -36

C) -35

D) -9

9

If a factory can manufacture b computer screens in n days at a cost of c dollars per screen, then which of the following represents the total cost, in dollars, of the computer screens that can be manufactured, at that rate, in m days?

A) $\frac{bcm}{n}$

B) $\frac{bmn}{c}$

C) $\frac{mc}{bn}$

D) $\frac{bc}{mn}$

10

Which of the following is equivalent to $5x(2x\times 3)-5x^2$ for all real values of x?

A) $5x^2+15x$

B) $25x^2$

C) $5x^2-15x$

D) $10x^2\times 15x-5x^2$

11

The symbol O represents one of the fundamental operators: $+$, $-$, $\times$, or $\div$. If $(x\ \mathrm{O}\ y)\times(y\ \mathrm{O}\ x)=1$ for all positive values of x and y, then O can represent

A) $+$

B) $\times$

C) $-$

D) $\div$