

Name \_\_\_\_\_

### Station #1

$$\frac{(3.8) - 2^2}{2^4 - (3.4)} = \boxed{5}$$

$$\frac{2[(7.3) + 6]}{26 \div 13} = \boxed{27}$$

$$50 \div [4.5 - 36 \div 2]$$
$$50 \div [20 - 18]$$
$$50 \div 2 = \boxed{25}$$

### Station #3

$$4^3 \cdot 4^2 = \boxed{4^5}$$

$$(-2)^3 = \boxed{-8}$$

$$-5^3 = \boxed{-125}$$

$$\left(\frac{2}{5}\right)^3 = \boxed{\frac{8}{125}}$$

### Station #2

Evaluate if  $a=2, b=4, c=3$

$$\textcircled{1} 2bc - a + c^2 = \boxed{31}$$

$$\textcircled{2} bc - ac + ab = \boxed{14}$$

Evaluate if  $r=6, s=4, t=-3$

$$\textcircled{3} \frac{4(r-s)}{t-1} = \boxed{-2}$$

$$\textcircled{4} 4r - 2s^2 - 3t = \boxed{-8\frac{1}{27}}$$

$$\textcircled{5} 4^{(t+2)} = \boxed{\frac{1}{4}}$$

### Station #4

$$\textcircled{1} (xy)^2 (x^4y^7) = \boxed{x^6y^9}$$

$$\textcircled{2} (12x^4y^7)(3x^7y^4) = \boxed{36x^{11}y^{11}}$$

$$\textcircled{3} (-5xy^3)^2 (2x^4y^6) = \boxed{50x^8y^{12}}$$

$$\textcircled{4} x^4y^7x^9y^3 = \boxed{x^{13}y^{10}}$$

### Station #5

①  $\frac{8x^4y^3}{2x^9y^6} = \frac{4}{x^5y^3}$

②  $\frac{-30x^5y^6z^2}{24x^5y^{12}z^{10}} = \frac{-5}{4y^6z^8}$

③  $\frac{12x^4yz^9}{20x^2y^3z^4} = \frac{3x^2z^5}{5y^2}$

④  $\frac{-9x^7y^2}{3x^4y} = -3x^3y$

### Station #6

①  $12^{-2} = \frac{1}{12^2} = \frac{1}{144}$

②  $5^{-3} = \frac{1}{5^3} = \frac{1}{125}$

③  $4^{-6} \cdot 4^2 = 4^{-6+2} = 4^{-4} = \frac{1}{4^4} = \frac{1}{256}$

④  $3^2 \cdot 3^{-3} = 3^{2+(-3)} = 3^{-1} = \frac{1}{3}$

### Station #8

①  $(2x^{-4}y)(3x^9y^3) = 6x^5y^4$

②  $(2x^{-4})(5x^7) = 10x^3$

③  $x^{-9} \cdot x^5 = \frac{1}{x^4}$

④  $\frac{20x^{-7}}{x^7} = \frac{20}{x^{14}}$

### Station #7

①  $\left(\frac{x}{y}\right)^{-2} = \frac{y^2}{x^2}$

②  $\left(\frac{2x}{y^3}\right)^{-3} = \frac{y^9}{8x^3}$

③  $\left(\frac{2}{5}\right)^{-2} = \frac{25}{4}$

④  $\left(\frac{3}{7}\right)^{-1} = \frac{7}{3}$

### Station #9

①  $\frac{x^{-6}y^5}{z^{-3}} = \frac{y^5z^3}{x^6}$

②  $\frac{12}{x^{-6}y^{-3}z^4} = \frac{2x^6y^3}{z^4}$

③  $\frac{20}{35x^{-9}y^3} = \frac{4x^9}{7y^3}$

④  $(y^{-3})^2 y^{-4} = \frac{1}{y^{10}}$

Station #1

$$\frac{24-4}{16-32} = \frac{20}{4} = 5$$

$$\frac{2[21+6]}{2} = \frac{54}{2} = 27$$

Station #3

$$4^3 \cdot 4^2 = 4^5 = 4^5$$

$$(-2)^3 = 2 \cdot 2 \cdot 2 = -8$$

Station #2

$$\frac{4r + 4(6-4)}{-3-1} = \frac{4 \cdot 2}{-4} = \frac{8}{-4} = -2$$

$$4 \cdot 6 - 2 \cdot 4^2 - 3^{-3} = 24 - 32 - \frac{1}{27} = -8 - \frac{1}{27} = -8\frac{1}{27}$$

$$4^{-3+2} = 4^{-1} = \frac{1}{4}$$

Station #2

$$2 \cdot 4 \cdot 3 - 2 + 3^2 = 24 - 2 + 9 = 31$$

$$4 \cdot 3 - 2 \cdot 3 + 2 \cdot 4 = 12 - 6 + 8 = 14$$

Station 4

$$x^2 \cdot y^2 \cdot x^4 \cdot y^7 = x^{2+4} y^{2+7} = x^6 y^9$$

$$12x^4y^7 \cdot 3x^7y^4 = 36x^{11}y^{11}$$

$$-10x^{2+4}y^{6+6} = -10x^6y^{12}$$

$$x^{4+9}y^{7+3} = x^{13}y^{10}$$



### Station #5

$$\textcircled{1} \frac{4x^{4-9}y^{3-6}}{4x^{-5}y^{-3}} = \frac{4}{x^5y^3}$$

$$\textcircled{2} \frac{-5x^{5-5}y^{6-12}z^{2-10}}{4}$$

$$\frac{-5x^0y^{-6}z^{-8}}{4}$$

$$\frac{-5}{4y^6z^8}$$

### Station #7

$$\textcircled{1} \left(\frac{2x}{y^3}\right)^{-3} = \left(\frac{y^9}{2^3x^3}\right) = \frac{y^9}{8x^3}$$

$$\textcircled{2} \frac{5^2}{2^2} = \frac{25}{4}$$

$$\frac{5^2}{2^2} = \frac{25}{4}$$

$$\textcircled{4} \frac{7}{3}$$

### Station #6 ✓ - on key

### Station #8 ✓

$$\textcircled{1} \frac{6x^{-4+9}y^{1+3}}{6x^5y^4}$$

$$\textcircled{2} 10x^{-4+7} = 10x^3$$

### Station #9 ✓

$$\textcircled{1} \frac{x^{-6}y^5}{z^{-3}} = \frac{y^5z^3}{x^6}$$

### Station #5

$$\textcircled{3} \frac{3x^{4-2}y^{1-3}z^{9-4}}{5} = \frac{3x^2z^5}{5y^2}$$

$$\textcircled{4} -6x^{7-4}y^{2-1} = -6x^3y^1$$