

18B

1) 625

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

3) 81

4) $7 \times 7 \times 7 = 343$

5) 289

6) ± 9

7) $5^{3+6} = 5^9$

8) $6^{4+2} = 6^6$

9) $18^{13-9} = 18^4$

10) $4^{8+5} = 4^{13}$

11) 16

12) $C^{1+2+3} = C^6$

13) $E^5 F^{3+4+2} = E^5 F^9$

14) $B^{6+7} C^{1+3} = B^{13} C^4$

15) $Y^{10+5-3} = Y^{12}$

16) $A^{8X-3X} = A^{5X}$

18C

1) 196

2) -11

3) 81

4) +7

5) $3^{3+3} = 3^6$

6) $5^{2+6} = 5^8$

7) $6^{5-2} = 6^3$

8) $4^{5+2} = 4^7$

9) $A^{5+2} B^{4+1} = A^7 B^5$

10) $B^Y + 2Y = B^{3Y}$

11) $A^{5-1} = A^4$

12) $X^{5+2-7} = X^0$

13) add

14) subtract

15) $5(N+2) - 2N = 4(N+1) - 40$

$$\begin{array}{rcl} 5N + 10 - 2N & = & 4N + 4 - 40 \\ 3N + 10 & = & 4N - 36 \\ N & = & 46 \end{array}$$

17) $.05N + .10D = 1.60, \quad N + D = 20$

$$\begin{array}{rcl} 5N + 10D & = & 160 \\ -5N - 5D & = & -100 \\ \hline 5D & = & 60 \\ D & = & 12 \end{array}$$

$$\begin{array}{rcl} N + (12) & = & 20 \\ N & = & 8 \end{array}$$

18) $3Y = -6X + 10$
 $Y = -2X + 10/3$

19) $Y = 3X + 2$
 $Y = X + 4$

$$\begin{array}{rcl} (X+4) & = & 3X+2 \\ X & \Rightarrow & 1 \text{ year} \end{array}$$

$$\begin{array}{rcl} Y & = & 1+4 \\ Y & = & 5 \Rightarrow 5 \text{ ft.} \end{array}$$

18D

1) -169

2) +12 or -12

3) 225

4) +10 or -10

5) $7^{3+4+1} = 7^8$

6) $2^{8+3+2} = 2^{13}$

7) $X^{2+9} = X^{11}$

8) $A^{4+5} B^2 = A^9 B^2$

9) $8^{5-3} = 8^2$

10) $10^{5-1} = 10^4$

11) $X^{10-4} = X^6$

12) $X^4 Y + 3Y - Y = X^6 Y$

13) divide

14) multiply

15) $4(N+2) + 3(N+4) = 8N - 11$

$$\begin{array}{rcl} 4N + 8 + 3N + 12 & = & 8N - 11 \\ 7N + 20 & = & 8N - 11 \\ 31 & = & N \end{array}$$

31, 33, 35

17) $.25Q + .10D = 1.60, \quad Q + D = 7$

$$\begin{array}{rcl} 25Q + 10D & = & 160 \\ -10Q - 10D & = & -70 \\ \hline 15Q & = & 90 \\ Q & = & 6 \end{array}$$

$$\begin{array}{rcl} (6) + D & = & 7 \\ D & = & 1 \end{array}$$

18) $Y = 37X + 30$

$$\begin{array}{rcl} (215) & = & 37X + 30 \\ 185 & = & 37X \\ 5 & = & X \Rightarrow 5 \text{ weeks} \end{array}$$

$$\begin{array}{rcl} (326) & = & 37X + 30 \\ 296 & = & 37X \\ 8 & = & X \Rightarrow 8 \text{ weeks} \end{array}$$