

8-30-17 15th Trig

Ch. 1 PT 1

45

	139	140	141	142	143	yellow
	Blue	Orange	Green	Purple	Red	
Row 1	1	2	3	4	5	6
Row 2	7	8	9	10	11	12
Row 3	13	14	15	16	17	18
...						24
...						30
...						...

143

Row

$$\frac{23}{138}$$

$$\frac{143}{6} = 23.833$$

138

46

$$2^{k+m} = 128$$

$$3^m = 27$$

$$m = 3$$

$$2^k = ?$$

$$2^4 = 16$$

$$2^7 = 128$$

$$k+m=7$$

$$k+3=7$$

$$k=4$$

New Review

① $(n+5)^2$

$$(n+5)(n+5)$$

$$n^2 + 5n + 5n + 25$$

$$n^2 + 10n + 25$$

② $(-3n^2y^3)^2$

$$-3n^2y^3 \cdot -3n^2y^3$$

$$-3nnyyy \cdot -3nnyyy$$

$$9n^4y^6$$

③ $\frac{a^{-3}b^2c^{-1}}{ab^4c^{-3}}$

$$\frac{b^2 c^3}{a^3 a b^4 c} = \frac{\cancel{b} \cancel{c} c}{a^3 a \cancel{b} \cancel{b} \cancel{b} \cancel{c}}$$

$$\frac{c^2}{a^4 b^2}$$

$$\textcircled{4} \left(\frac{2n^2}{y} \right)^{-2}$$

$$\left(\frac{2n^2}{y} \right)^{-1} \cdot 2$$

$$\left(\frac{y}{2n^2} \right)^2 = \frac{y}{2n^2} \cdot \frac{y}{2n^2} = \frac{y^2}{4n^4}$$

$$\textcircled{5} \left(\frac{2^{-1} a^2 b^{-3}}{c} \right)^{-2}$$

$$\left(\frac{a^2}{2b^3c} \right)^{-1} \cdot 2$$

$$\left(\frac{2b^3c}{a^2} \right)^2$$

$$\frac{2b^3c}{a^2} \cdot \frac{2b^3c}{a^2} = \frac{4b^6c^2}{a^4}$$

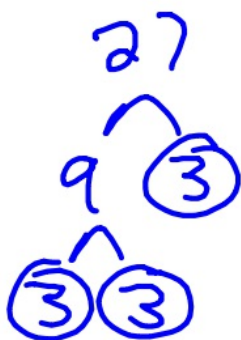
$$\textcircled{6} (-2a^3b)^{-2}$$

$$\left(\frac{-2a^3b}{1} \right)^{-1} \cdot 2$$

$$\left(\frac{1}{-2a^3b} \right)^2$$

$$\frac{1}{-2a^3b} \cdot \frac{1}{-2a^3b} = \frac{1}{4a^6b^2}$$

$$\textcircled{7} \frac{6 \pm \sqrt{-27}}{9}$$



$$\frac{6 \pm \frac{1}{3}i\sqrt{3}}{9}$$

$$\frac{2 \pm i\sqrt{3}}{3}$$

$$\textcircled{8} \quad 2n^4(3n)^2 + (2n^2)^3$$

$$2n^n n n n \quad 3n \quad 3n + \quad 2n^2 \cdot 2n^2 \cdot 2n^2$$

$$18n^6 + 8n^6$$

$$26n^6$$

8-30-17 3rd J.C.;

Ch. 1 PT 1

45

Blue, orange, green, purple, red, yellow

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
					24
					30
					36
					42
					138
					180

23rd

30th

$$\frac{143}{6} = 23 \dots$$

23 things < 30

$$\begin{array}{r} 23 \\ \times 6 \\ \hline 138 \end{array}$$

46 $2^{k+m} = 128$ $3^m = 27$
 $2^k = ?$ $m = 3$

$$2^7 = 128$$

$$k+m = 7$$

$$k+3 = 7$$

$$k = 4$$

$$2^4 = 16$$

New Practice

① $(n+5)^2$
 $(n+5)(n+5)$
 $n^2 + 5n + 5n + 25$
 $n^2 + 10n + 25$

② $\left(\frac{2a^2b^3}{c^3}\right)^3$
 $\frac{2a^2b^3}{c^3} \cdot \frac{2a^2b^3}{c^3} \cdot \frac{2a^2b^3}{c^3}$
 $\frac{8a^6b^9}{c^9}$

$$\textcircled{3} (2x^2 + 5)^2$$

$$(2x^2 + 5)(2x^2 + 5)$$

$$4x^4 + 10x^2 + 10x^2 + 25$$

$$4x^4 + 20x^2 + 25$$

$$\textcircled{4} \frac{9 + \sqrt{-27}}{18}$$

$$\frac{\overset{3}{\cancel{9}} + \overset{3}{\cancel{3}}i\sqrt{3}}{\underset{6}{\cancel{18}}} = \frac{3 + i\sqrt{3}}{6}$$

$$\textcircled{5} \frac{a^{-3} b^2 c^{-1}}{a^{-1} b^5 c^2}$$

$$\frac{a b^2}{a^3 b^5 c^2 c} = \frac{\cancel{a} \cancel{b} \cancel{b}}{\cancel{a} \cancel{a} \cancel{a} \cancel{b} \cancel{b} \cancel{b} \cancel{c} \cancel{c}}$$

$$= \frac{1}{a^2 b^3 c^2}$$

$$\textcircled{6} (2n^3y^2)^2 + (4ny)^2$$

$$2n^3y^2 \cdot 2n^3y^2 + 4ny \cdot 4ny$$

$$4n^6y^4 + 16n^2y^2$$

$$\textcircled{7} \left(\frac{-5a^3}{y^2} \right)^{-2}$$

$$\left(\frac{-5a^3}{y^2} \right)^{-1 \cdot 2}$$

$$\left(\frac{y^2}{-5a^3} \right)^2 = \frac{y^2}{-5a^3} \cdot \frac{y^2}{-5a^3} = \frac{y^4}{25a^6}$$

$$\textcircled{8} (-3a^2b)^{-2}$$

$$\left(\frac{-3a^2b}{1} \right)^{-1 \cdot 2}$$

$$\left(\frac{1}{-3a^2b} \right)^2 = \frac{1}{-3a^2b} \cdot \frac{1}{-3a^2b} = \frac{1}{9a^4b^2}$$

8-30-17 4th Trig

Ch 1 PT 1

(45)

.1234567

	¹³⁹ Blue	¹⁴⁰ Orange	¹⁴¹ Green	¹⁴² Purple	¹⁴³ Red	Yellow
Row 1	1	2	3	4	5	6
2	7	8	9	10	11	12
3	13	14	15	16	17	18
4						24
5	_____ x6					30
6	_____ x6					36
7	_____ x6					42
23	_____ x6					138
30	_____ x6					180

$$\frac{143}{6} = 23. \quad \begin{array}{r} 23 \\ \times 6 \\ \hline 138 \end{array}$$

↑
Row

(46) $2^{k+m} = 128$ $3^m = 27$
 $2^k = ?$ $m = 3$
 $2^7 = 128$

$$2^4 = 16$$

$k+m=7$
 $k+3=7$
 $k=4$

New practice

① $(n+5)^2$
 $(n+5)(n+5)$
 $n^2 + 5n + 5n + 25$
 $n^2 + 10n + 25$

② $(-3n^2y^4)(2n^2y^3)$
 $-3nnyyyy \quad 2nnyyyy$
 $-6n^4y^7$

$$\textcircled{3} \left(\frac{-3n^2y^4}{5a} \right)^{-2}$$

$$\left(\frac{-3n^2y^4}{5a} \right)^{-1 \cdot 2}$$

$$\left(\frac{5a}{-3n^2y^4} \right)^2$$

$$\frac{5a}{-3n^2y^4} \cdot \frac{5a}{-3n^2y^4} = \frac{25a^2}{9n^4y^8}$$

$$\textcircled{4} (-2a^2b)^{-2}$$

$$\left(\frac{-2a^2b}{1} \right)^{-1 \cdot 2}$$

$$\left(\frac{1}{-2a^2b} \right)^2 = \frac{1}{-2a^2b} \cdot \frac{1}{-2a^2b} = \frac{1}{4a^4b^2}$$

$$\textcircled{5} \left(\frac{a^{-2}b}{a^{-3}b^{-2}} \right)^{-2}$$

$$\left(\frac{a^3 \quad bb^2}{\cancel{a^2}} \right)^{-1 \cdot 2}$$

$$\left(\frac{ab^3}{1} \right)^{-1 \cdot 2}$$

$$\left(\frac{1}{ab^3} \right)^2 = \frac{1}{ab^3} \cdot \frac{1}{ab^3} = \frac{1}{a^2b^6}$$

$$\textcircled{6} \frac{9 \pm \sqrt{-27}}{9} = \frac{9 \pm 3i\sqrt{3}}{9}$$

$$\begin{array}{c} 27 \\ \uparrow \\ 1 \textcircled{3} \\ \uparrow \\ \textcircled{3} \textcircled{3} \end{array}$$

$$= \frac{3 \pm i\sqrt{3}}{3}$$