

8-18-17 1st Trig

$$\textcircled{1} \quad 4(2x-3) - (x+1) = 3(x-5)$$

$$8x - 12 - x - 1 = 3x - 15$$

$$7x - 13 = 3x - 15$$

$-3x$ $-3x$

$$4x - 13 = -15$$

$+13$ $+13$

$$\frac{4 \cdot x}{4} = \frac{-2}{4}$$

$$x = -\frac{1}{2}$$

$$\textcircled{2} \quad x^3 \cdot x^4 = x^{12} \text{ or } x^7$$

$$\begin{array}{c} \downarrow \qquad \downarrow \\ x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x = x^7 \end{array}$$

$$\textcircled{3} \quad (5x^2)(2x^4)$$

$$\begin{array}{c} \downarrow \qquad \downarrow \\ 5 \cdot x \cdot x \cdot 2 \cdot x \cdot x \cdot x \cdot x \\ 10x^6 \end{array}$$

$$\textcircled{4} \quad a^2 b^3 \cdot a b^2$$

$$a \cdot a \cdot b \cdot b \cdot b \cdot a \cdot b \cdot b$$

$$a^3 b^5$$

$$\textcircled{5} \quad (3a^2 b^4)(-2ab)$$

$$3 \cdot a \cdot a \cdot b \cdot b \cdot b \cdot b \cdot -2 \cdot a \cdot b$$

$$-6a^3 b^5$$

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

$$2a^3 b^2 \cdot 2a^3 b^2$$

$$2 \cdot a \cdot a \cdot a \cdot b \cdot b \quad 2 \cdot a \cdot a \cdot a \cdot b \cdot b$$

$$4a^6 b^4$$

$$\textcircled{7} \quad (-2a^4)^3$$

$$-2a^4 \cdot -2a^4 \cdot -2a^4$$

$$-2 \cdot a \cdot a \cdot a \cdot a \quad -2 \cdot a \cdot a \cdot a \cdot a \quad -2 \cdot a \cdot a \cdot a \cdot a$$

$$-8a^{12}$$

$$\textcircled{8} \quad (2a^3 b)^2 \cdot (ab^2)^2$$

$$2a^3 b \quad 2a^3 b \cdot ab^2 \quad ab^2$$

$$2 \cdot a \cdot a \cdot a \cdot b \quad 2 \cdot a \cdot a \cdot a \cdot b \quad a \cdot b \cdot b \quad a \cdot b \cdot b$$

$$4a^8 b^6$$

$$\textcircled{9} (-2a^3b^2)^3$$

$$-2a^3b^2 \quad -2a^3b^2 \quad -2a^3b^2$$

$$-2aabb \quad -2aabb \quad -2aabb$$

$$-8a^9b^6$$

$$\textcircled{10} (a^4b)^{10}$$

$$\underbrace{a^4b \cdot a^4b \cdot \dots \cdot a^4b}_{10 \text{ of them}}$$

10 of them

$$a^{40}b^{10}$$

$$\textcircled{11} (3a^4b^3)^2 \cdot (2ab) \cdot (a^4b^2)^2$$

$$3a^4b^3 \cdot 3a^4b^3 \cdot 2ab \cdot a^4b^2 \cdot a^4b^2$$

$$3a^4a^4a^4bbb \quad 3a^4a^4a^4bbb \quad 2ab \quad a^4a^4a^4a^4b^2b^2b^2b^2$$

$$18a^{17}b^{11}$$

$$\textcircled{12} 4(2n+3) - 2(n+3) = 3(n+1)$$

$$8n+12 - 2n - 6 = 3n+3$$

$$\begin{array}{r} 6n+6 = 3n+3 \\ -3n \quad -3n \\ \hline \end{array}$$

$$\begin{array}{r} 3n+6 = 3 \\ -6 \quad -6 \\ \hline \end{array}$$

$$\frac{3n}{3} = \frac{-3}{3}$$

$$n = -1$$

$$\textcircled{13} 4n - (2n - 8) = 20$$

$$4n - 2n + 8 = 20$$

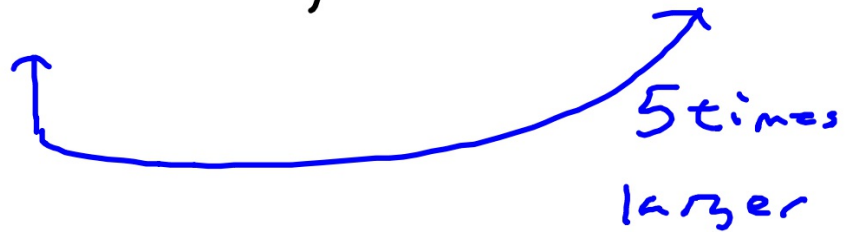
$$\begin{array}{r} 2n+8 = 20 \\ -8 \quad -8 \\ \hline \end{array}$$

$$\frac{2n}{2} = \frac{12}{2}$$

$$n = 6$$

SAT

(14) If $2x - 1 = 9$, what is $10x - 5$?



$$9 \cdot 5 = 45$$

8-18-17 3rd Trig

$$\textcircled{1} \quad 4(2n-3) - (n-8) = 2(n+1)$$

$$8n - 12 - n + 8 = 2n + 2$$

$$\begin{array}{r} 7n - 4 = 2n + 2 \\ -2n \quad -2n \\ \hline \end{array}$$

$$\begin{array}{r} 5n - 4 = 2 \\ +4 \quad +4 \\ \hline \end{array}$$

$$\frac{5n}{5} = \frac{6}{5}$$

$$n = 1\frac{1}{5}$$

$$\textcircled{2} \quad n^3 \cdot n^4 = n^7 \text{ or } n^{12} ?$$

↓ ↓

$$\begin{array}{c} n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n \\ n^7 \end{array}$$

$$\textcircled{3} \quad 2n^3 \cdot 3n \cdot 2n^2$$

$$\begin{array}{c} 2 \cdot n \cdot n \cdot n \cdot 3 \cdot n \cdot 2 \cdot n \cdot n \\ 12n^6 \end{array}$$

$$\textcircled{4} \quad (3a^2b)(2ab^4)$$

$$3aab \quad 2abbbb$$

$$6a^3b^5$$

$$\begin{aligned} \textcircled{5} \quad & (2a^3)^2 \\ & 2a^3 \cdot 2a^3 \\ & 2aaa \quad 2aaa \\ & 4a^6 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & (3a^2b^3)^2 \cdot (2ab^2)^2 \\ & 3a^2b^3 \cdot 3a^2b^3 \cdot 2ab^2 \cdot 2ab^2 \\ & 3aa bbb \quad 3aa bbb \quad 2abb \quad 2abb \\ & 36a^6b^{10} \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad & (-3a^3bc^2)^3 \\ & (-3a^3bc^2)(-3a^3bc^2)(-3a^3bc^2) \\ & -27a^9b^3c^6 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad & (-3abc)(2a^2b^4)(-2abc^3) \\ & -3abc \cdot 2aa bbbb \cdot -2abccc \\ & 12a^4b^6c^4 \end{aligned}$$

$$\textcircled{9} \quad a^3 \cdot a^{100} =$$

$\underbrace{aaa \quad aaa}_{100 \text{ of them}}$
 a^{103}

$$\textcircled{10} \quad 3(n+1) - (n-4) = 10$$

$$3n+3 - n+4 = 10$$

$$2n+7 = 10$$

$$\begin{array}{r} -7 \quad -7 \\ \hline \end{array}$$

$$\frac{2n}{2} = \frac{3}{2}$$

$$n = 1\frac{1}{2}$$

$$\textcircled{11} \quad -3(n-4) - (n-5) = 6(n+4) - (n-1)$$

$$-3n+12 - n+5 = 6n+24 - n+1$$

$$-4n+17 = 5n+25$$

$$\begin{array}{r} +4n \qquad \qquad \qquad +4n \\ \hline \end{array}$$

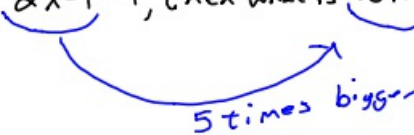
$$17 = 9n+25$$

$$\begin{array}{r} -25 \qquad \qquad \qquad -25 \\ \hline \end{array}$$

$$\frac{-8}{9} = \frac{9n}{9}$$

$$-\frac{8}{9} = n$$

$$\textcircled{12} \quad \text{If } \underbrace{2x-1=9}, \text{ then what is } \underbrace{10x-5}?$$



$$9 \cdot 5 = 45$$

8-18-17 4th Trig

$$\textcircled{1} -4(n+6) - (10-6n) = 40$$

$$-4n - 24 - 10 + 6n = 40$$

$$\begin{array}{r} 2n - 34 = 40 \\ +34 \quad +34 \\ \hline \end{array}$$

$$\frac{2n}{2} = \frac{74}{2} \quad \frac{60+14}{2} \quad \frac{7}{2}$$

$$n = 37$$

$$\textcircled{2} n^3 \cdot n^5 = n^8 \text{ or } n^{15} ?$$

$$\begin{array}{c} \downarrow \quad \downarrow \\ n \cdot n \cdot n \cdot n \cdot n \cdot n \cdot n \\ n^8 \end{array}$$

$$\textcircled{3} 3n^2 \cdot 2n^4$$

$$3 \cdot n \cdot n \cdot 2 \cdot n \cdot n \cdot n \cdot n$$

$$6n^6$$

$$\textcircled{4} (a^4 b^2)(a b^3)$$

$$a a a a b b a b b b$$

$$a^5 b^5$$

$$\textcircled{5} (2a^2 b)^3$$

$$2a^2 b \cdot 2a^2 b \cdot 2a^2 b$$

$$2a a b \cdot 2a a b \cdot 2a a b$$

$$8a^6 b^3$$

$$\textcircled{6} (2ny^3)^2 \cdot (2ny)^2$$

$$2ny^3 \cdot 2ny^3 \cdot 2ny \cdot 2ny$$

$$2nyyy \cdot 2nyyy \cdot 2ny \cdot 2ny$$

$$16n^4 y^8$$

$$\textcircled{7} (-4ny^3)(-2ny)(ny)^2$$

$$-4nyyy \cdot -2ny \cdot ny \cdot ny$$

$$8n^4 y^6$$

$$\textcircled{8} \quad n^4 \cdot n^{100}$$

$n n n n$ $n \cdot n \cdot n \cdot n \cdot n \cdot \dots$
100 of them

$$n^{104}$$

$$\textcircled{9} \quad (-2n^2y)^3$$

$$\begin{aligned} & -2n^2y \quad -2n^2y \quad -2n^2y \\ & -2nny \quad -2nny \quad -2nny \\ & -8n^6y^3 \end{aligned}$$

$$\textcircled{10} \quad (-3n^2y^3)^2 \cdot (2ny^2)^2$$

$$\begin{aligned} & -3n^2y^3 \cdot -3n^2y^3 \cdot 2ny^2 \cdot 2ny^2 \\ & -3nnyyy \quad -3nnyyy \quad 2nyy \quad 2nyy \\ & 36n^6y^{10} \end{aligned}$$

$$\textcircled{11} \quad \text{If } \underline{2x-1=9}, \text{ what is } \underline{10x-5?}$$

5 times larger

$$9 \times 5 = 45$$