

$$\begin{aligned} & 2(x-4)^2 + 3y - 2z \\ & x = -2 \quad y = 3 \quad z = 5 \\ & 2(-2-4)^2 + 3(3) - 2(5) \\ & 2(-6)^2 + 9 - 10 \\ & 2(36) + 9 - 10 \\ & 72 + 9 - 10 \end{aligned}$$

71

$$\begin{aligned} & \textcircled{5} \frac{(2x^2 y^3 z)^4}{(10x^{-4} y^6 z^{10})^2} \\ & = \frac{2^4 x^8 y^{12} z^4}{10^2 x^{-8} y^{12} z^{20}} \\ & = \frac{16 x^8 x^8 y^{12} z^4}{100 y^{12} z^{20}} \\ & = \frac{4x^{16}}{25z^{16}} \end{aligned}$$

$\frac{4x^{16}}{25z^{16}}$

Ch. 1 Quiz
Practice
Atq 2
Honors

$$\begin{aligned} & \textcircled{9} C = 2\pi r \quad r = ? \\ & \frac{C}{2\pi} = r \end{aligned}$$

$r = \frac{C}{2\pi}$

$$\begin{aligned} & \textcircled{2} -3(-4^2 + 2xy^2 - 5x^3 y^2 z) \\ & = -3(-16 + 2(-2)(3)(5) - 5(-2)^3(3)^2(5)) \\ & = -3(-16 - 60 - 5(8)(9)(5)) \\ & = -3(-16 - 60 + 1800) \\ & = -3(-76 + 1800) \\ & = -3(1724) \end{aligned}$$

-5172

$$\begin{aligned} & \textcircled{6} \frac{2x^{-4} y^{10} z^{-12}}{4^{-2} x^{10} y^6 z^{-8}} \cdot \frac{-10^2 x^{-4} y^{-6} z^{11}}{x^{16} y^{-2} z^{-8}} \\ & \frac{2 \cdot 4^2}{x^{10} x^4 y^{10} y^6 z^{12}} \cdot \frac{-10^2 y^2 z^{11} z^8}{x^{16} x^4 y^6} \\ & \frac{2 \cdot 16 y^{10}}{x^{14} y^6 z^4} \cdot \frac{-100 z^{19}}{x^{20} y^4} \\ & = \frac{-3200 z^{15}}{x^{34}} \end{aligned}$$

$\frac{-3200 z^{15}}{x^{34}}$

$$\begin{aligned} & \textcircled{10} -\frac{2}{3}x + 5 > -6 \\ & -\frac{2}{3}x > -11 \\ & x \leq -11 \left(\frac{-3}{2} \right) \end{aligned}$$

$x \leq \frac{33}{2}$

$$\begin{aligned} & \textcircled{3} \left(\frac{8}{3} \right)^{-2} \\ & = \frac{8^{-2}}{3^{-2}} \\ & = \frac{3^2}{8^2} \end{aligned}$$

$\frac{9}{64}$

$$\begin{aligned} & \textcircled{7} p = 2l + 2w \quad l = ? \\ & p - 2w = 2l \\ & \frac{p - 2w}{2} = l \end{aligned}$$

$l = \frac{p - 2w}{2}$

$$\begin{aligned} & \textcircled{11} -3(5x+6) + 8 \leq -10(-2x-7) \\ & -15x - 18 + 8 \leq 20x + 70 - 3 \\ & -15x - 10 \leq 20x + 67 \\ & -10 \leq 35x + 67 \\ & -77 \leq 35x \\ & \frac{-77}{35} \leq x \end{aligned}$$

$x \geq -\frac{11}{5}$

$$\begin{aligned} & \textcircled{4} \frac{x^{12} \cdot x^{18}}{x^{50}} \\ & = \frac{x^{30}}{x^{50}} \\ & = \frac{1}{x^{50-30}} \end{aligned}$$

$\frac{1}{x^{20}}$

$$\begin{aligned} & \textcircled{8} V = \frac{4}{3} \pi r^3 \quad r = ? \\ & \frac{3}{4} V = \pi r^3 \\ & \frac{3V}{4\pi} = r^3 \\ & r = \sqrt[3]{\frac{3V}{4\pi}} \end{aligned}$$

$r = \sqrt[3]{\frac{3V}{4\pi}}$

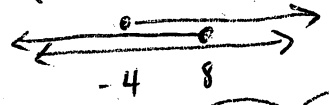
$$\begin{aligned} & \textcircled{12} 8x + 1 > -19 \\ & 8x > -20 \\ & x > \frac{-20}{8} \\ & x > \frac{-5}{2} \end{aligned}$$

$x > -\frac{5}{2}$

$$\begin{aligned} 13) \quad & \frac{-4(3x-5)}{-2} \geq 16 \\ & -4(3x-5) \leq -32 \\ & 3x-5 \geq 8 \\ & 3x \geq 13 \end{aligned}$$

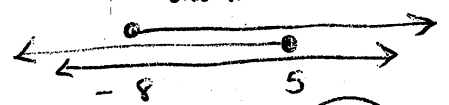
$x \geq \frac{13}{3}$

$$\begin{aligned} 17) \quad & \left| \frac{1}{2}x - 1 \right| \leq 3 \\ & \frac{1}{2}x - 1 \leq 3 \quad \text{and} \quad \frac{1}{2}x - 1 \geq -3 \\ & \frac{1}{2}x \leq 4 \quad \downarrow \quad \frac{1}{2}x \geq -2 \\ & x \leq 8 \quad \text{intsn?} \quad x \geq -4 \end{aligned}$$



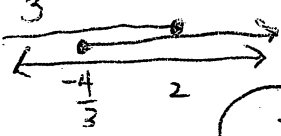
$-4 \leq x \leq 8$

$$\begin{aligned} 19) \quad & |2x+3| \geq -13 \\ & 2x+3 \geq -13 \quad \text{or} \quad 2x+3 \leq 13 \\ & 2x \geq -16 \quad \downarrow \quad 2x \leq 10 \\ & x \geq -8 \quad \text{union} \quad x \leq 5 \\ & \quad \quad \quad \text{one line} \end{aligned}$$



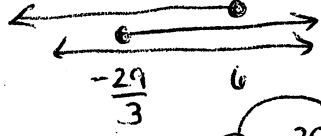
all real #s

$$\begin{aligned} 14) \quad & -18 \leq 2(3x-5) \leq 2 \\ & -18 \leq 6x-10 \leq 2 \\ & -8 \leq 6x \leq 12 \\ & -\frac{4}{3} \leq x \leq 2 \end{aligned}$$



$-\frac{4}{3} \leq x \leq 2$

$$\begin{aligned} 18) \quad & |11+6x| \leq 47 \\ & 11+6x \leq 47 \quad \text{and} \quad 11+6x \geq -47 \\ & 6x \leq 36 \quad \quad \quad 6x \geq -58 \\ & x \leq 6 \quad \quad \quad x \geq \frac{-58+2}{6} \\ & \quad \quad \quad \text{and} \quad x \geq \frac{-29}{3} \end{aligned}$$



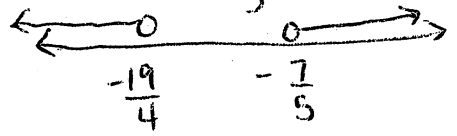
$-\frac{29}{3} \leq x \leq 6$

$$20) \quad |3x-8| < -10$$

no solution

$$\begin{aligned} 15) \quad & 4x-2(7x+4) < 6 \quad \text{and} \quad 3+7(2x+4) < 12 \\ & 4x-14x-8 < 6 \quad \text{and} \quad 3+14x+28 < 12 \\ & -10x-8 < 6 \quad \text{and} \quad 14x+31 < 12 \\ & -10x < 14 \quad \text{and} \quad 14x < -19 \\ & x > -\frac{14}{10} \quad \text{and} \quad x < -\frac{19}{14} \\ & x > -\frac{7}{5} \end{aligned}$$

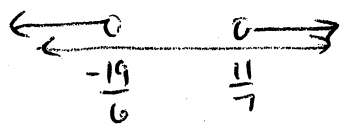
and
look for the intsn or overlapping of 2 graphs!



no solution

21) See website for further details for #21-30

$$\begin{aligned} 16) \quad & 7x+5 > 16 \quad \text{or} \quad 2(3x+6)+8 < 1 \\ & 7x > 11 \quad \quad \quad 6x+12+8 < 1 \\ & x > \frac{11}{7} \quad \quad \quad 6x+20 < 1 \\ & \quad \quad \quad \text{OR} \quad 6x < -19 \\ & \quad \quad \quad \text{union} \quad x < -\frac{19}{6} \end{aligned}$$



$x > \frac{11}{7} \quad \text{or} \quad x < -\frac{19}{6}$