

Volume Pyramid and Cones
Day 2- Volume

H.W.

Name _____

WARM-UP:

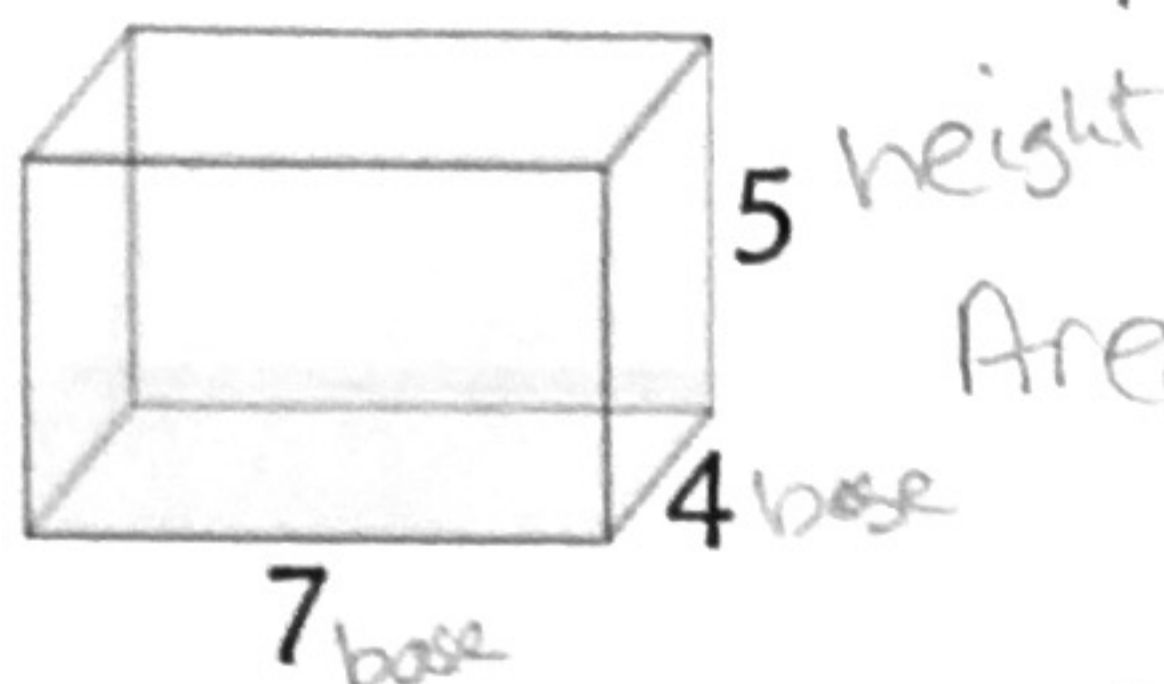
Find the volume of these shapes.

pg 639 #3, 4, 11-14

pg 645 #7-9

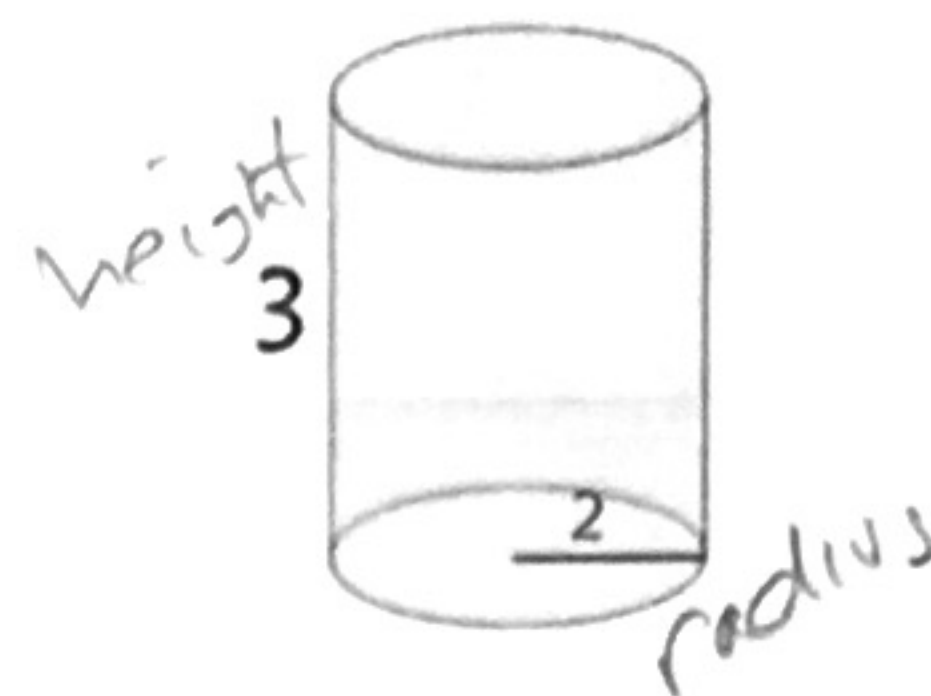
Base • height
 $\pi \cdot r^2 \cdot 3$

$V = B \cdot h$



Area of Base $7 \cdot 4 = 28$
• Height

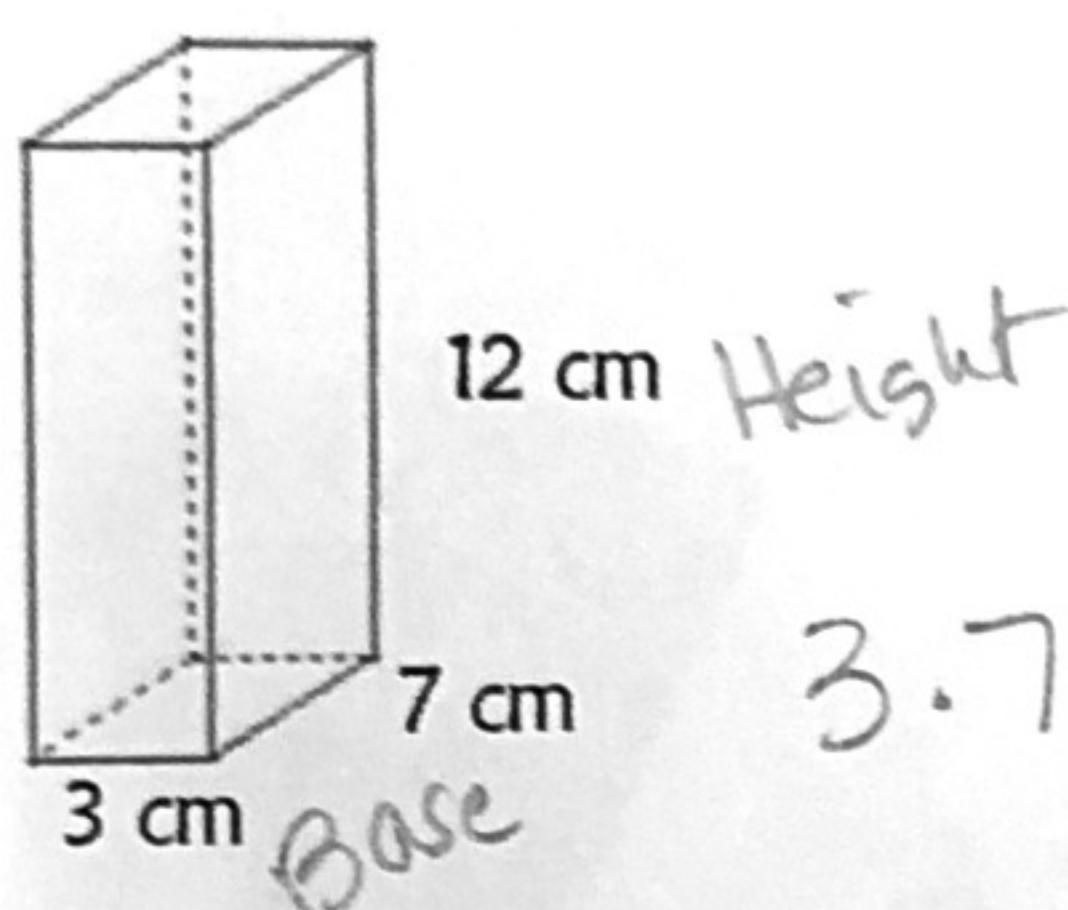
$28 \cdot 5 = 140 u^3$



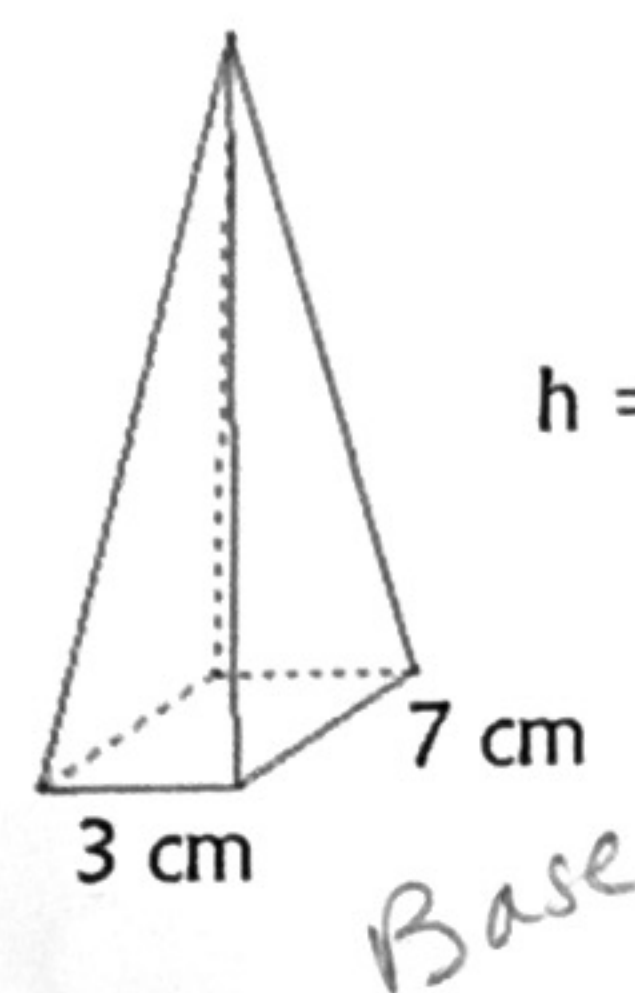
$37.68 u^3$

Pyramids:

A pyramid has $\frac{1}{3}$ the volume of a prism with same height and base.



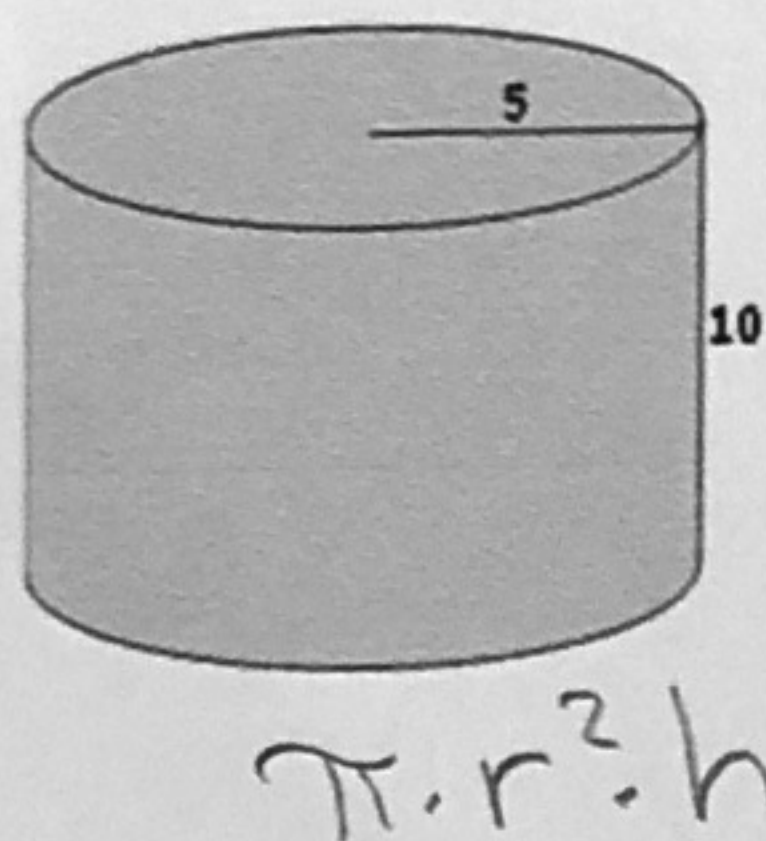
$3 \cdot 7 \cdot 12 = 252 cm^3$



$\frac{1}{3} \cdot 252 = 84 cm^3$

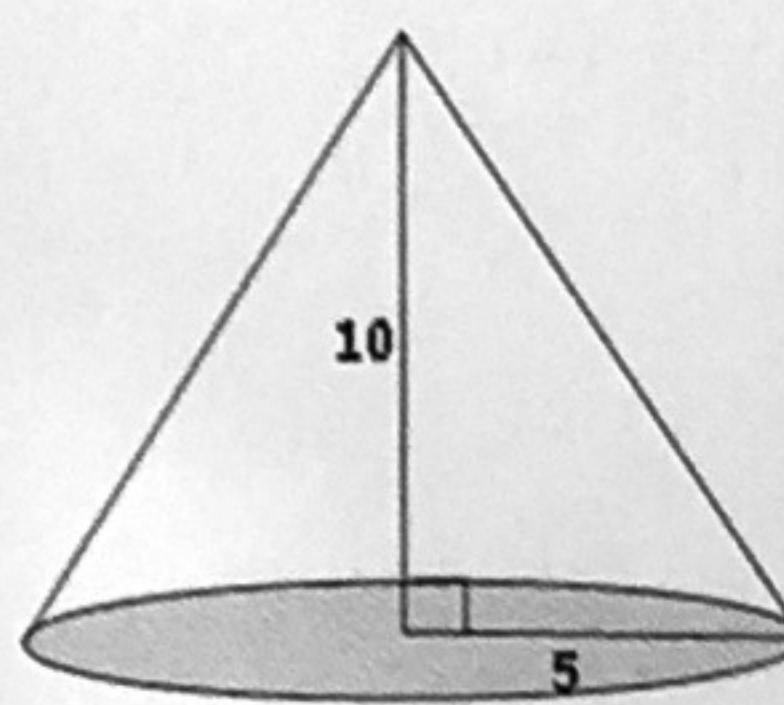
Cones:

A cone has $\frac{1}{3}$ the volume of a cylinder with same height and base.



$785 u^3$

$\pi \cdot r^2 \cdot h$

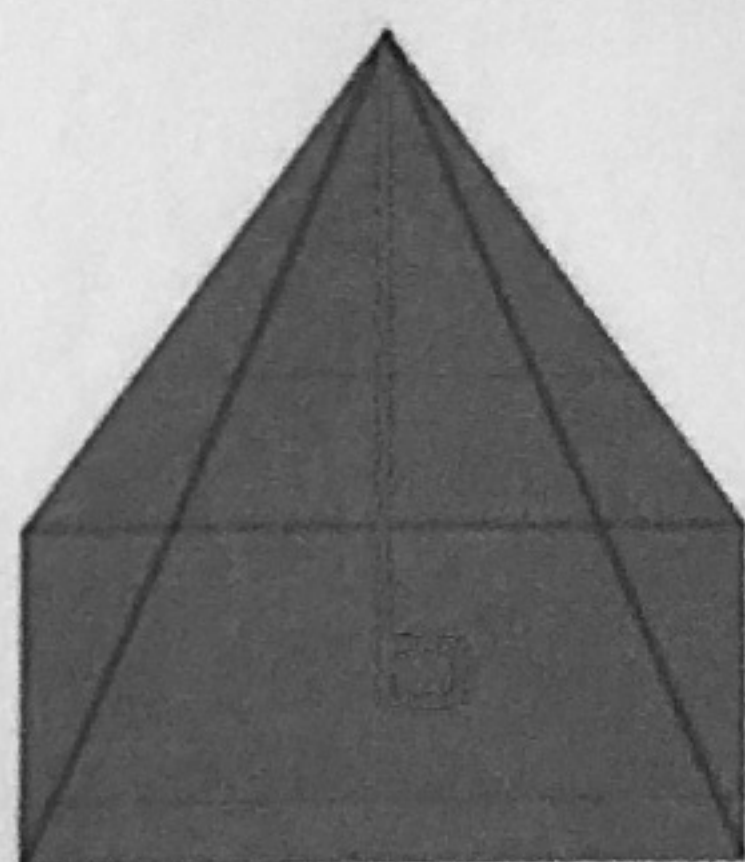


$\frac{1}{3} (785) =$

$261.67 u^3$

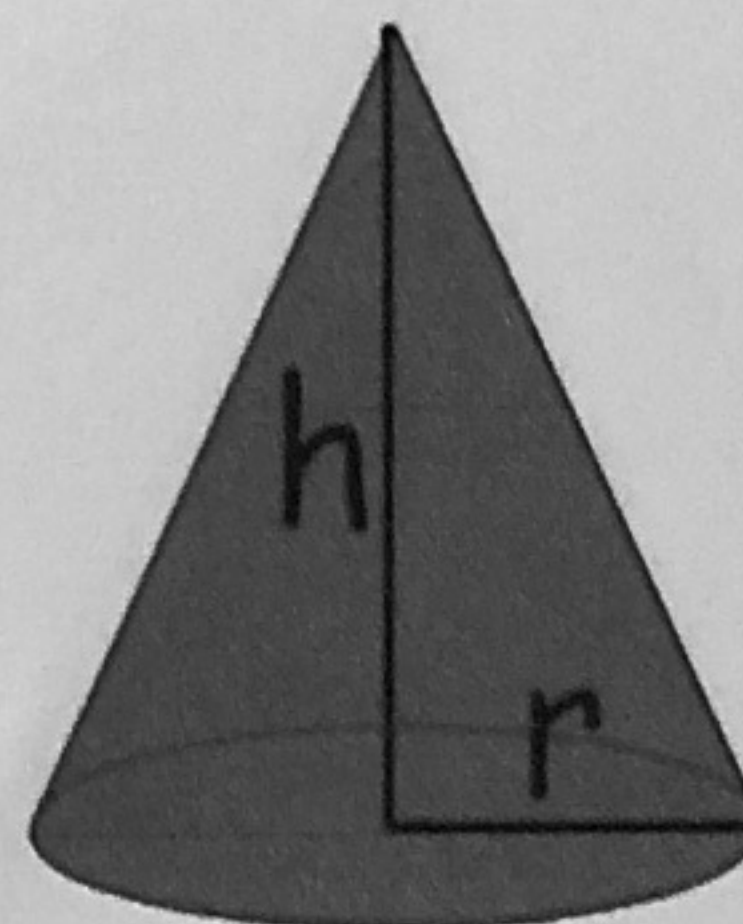
VOLUME OF PYRAMIDS

$V = \text{Area of Base} \cdot \text{height}$

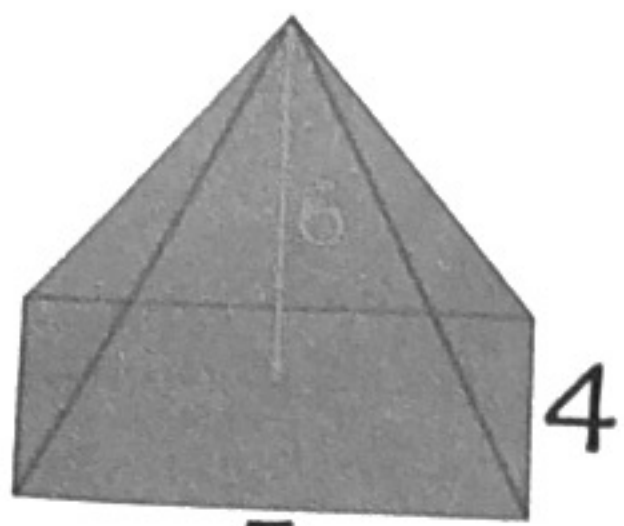


VOLUME OF CONES:

$V = \frac{1}{3} \text{Area of Base} \cdot \text{Height}$



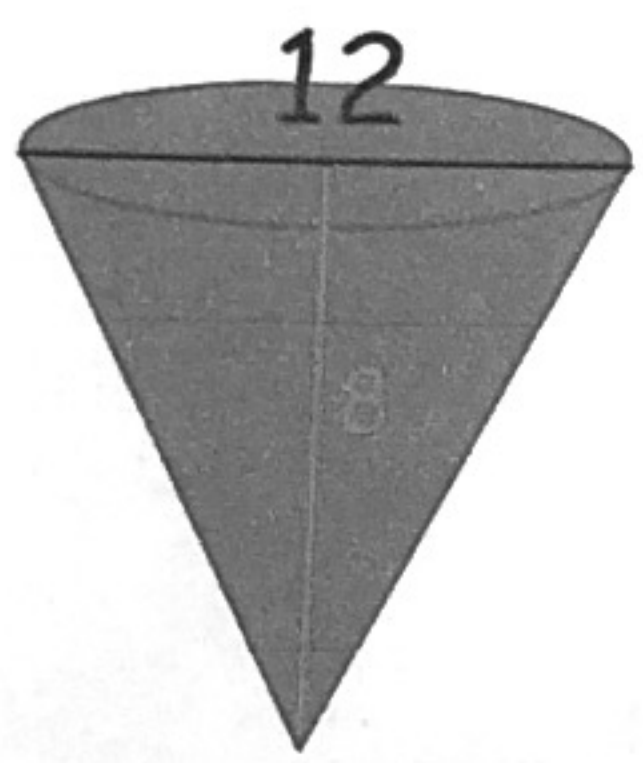
AMPLES:
ind the volume of the shapes.



$$\frac{1}{3}(5)(4)(6) = 40u^3$$



$$\frac{1}{3}(\pi)(4^2)(5) = 83.73u^3$$



$r=6$

$$\frac{1}{3} \cdot \pi \cdot 6^2 \cdot 8 = 301.44u^3$$

Alg2T Chap8 D4

p 593 # 9-12, 15-25 odd

$$(9) \frac{x-3}{x+5} = \frac{x}{x+2}$$

$$\begin{aligned} (x-3)(x+2) &= x(x+5) \\ x^2 - x - 6 &= x^2 + 5x \\ -6 &= 6x \\ \boxed{x = -1} \end{aligned}$$

$$(10) \frac{x}{x^2-2} = \frac{-1}{x}$$

$$\begin{aligned} x^2 &= -1(x^2-2) \\ x^2 &= -x^2 + 2 \\ 2x^2 &= 2 \\ x^2 &= 1 \quad \boxed{x = \pm 1} \end{aligned}$$

$$(11) \frac{4(x-4)}{x^2+2x-8} = \frac{4}{(x+4)}$$

$$\begin{aligned} 4(x-4)(x+4) &= 4(x^2+2x-8) \\ 4(x^2-16) &= 4x^2+8x-32 \\ 4x^2-64 &= 4x^2+8x-32 \\ -32 &= 8x \\ \boxed{x = -4} &\quad \text{not possible} \\ &\quad \text{to plug into denominator} \end{aligned}$$

$$(12) \frac{9}{x^2-6x+9} = \frac{3x}{x^2-3x}$$

$$\begin{aligned} 9(x^2-3x) &= 3x(x^2-6x+9) \\ 9x^2-27x &= 3x^3-18x^2+27x \\ 0 &= 3x^3-27x^2+54x \\ 0 &= (3x^2-27x+54) \\ &\quad (x^2-9x+18) \\ &\quad (x-3)(x-6) \quad \boxed{x=6} \\ &\quad \text{NOT POSSIBLE} \end{aligned}$$

11/23
Agt
Dy

$$(15) \frac{2}{3x} \frac{bx}{1} + \frac{1}{6} \frac{bx}{1} - \frac{4}{3x} \frac{bx}{1} \quad \frac{LCD}{6x}$$

$$4 + x = 8$$

$$\boxed{x = 4}$$

$$(17) \frac{2x(x+7)}{1} \frac{1}{2x} + \frac{3}{(x+7)} \frac{2x(x+7)}{1} - \frac{1}{x} \frac{2x(x+7)}{1} \quad \frac{LCD}{2x(x+7)}$$

$$x+7 + 6x = -1(2(x+7))$$

$$7x+7 = -2x-14$$

$$9x = -21$$

$$x = \boxed{-21/9 = -\frac{7}{3}}$$

$$(19) \frac{5}{x^2+x-6} = 2 + \frac{x-3}{(x-2)}$$

$$LCD = (x+3)(x-2)$$

$$\frac{(x+3)(x-2)}{1} \frac{5}{(x+3)(x-2)} = 2 \frac{(x+3)(x-2)}{1} + \frac{(x-3)}{(x-2)} \frac{(x-2)(x+3)}{1}$$

$$5 = 2(x^2+x-6) + x^2-9$$

$$5 = 2x^2 + 2x - 12 + x^2 - 9$$

$$0 = 3x^2 + 2x - 26$$

quadratic
formula
only way
to get answer

NTY

Chp 8

D4

Algebra 2

(21)

$$\frac{(x-3)x}{1} \cdot \frac{2}{(x-3)} + \frac{1(x-3)}{x} \cdot \frac{(x-1)}{(x-3)} \cdot \frac{(x-3)x}{1} \quad \text{LCM} = (x-3)x$$

$$2x + x - 3 = x(x-1)$$

$$3x - 3 = x^2 - x$$

$$0 = x^2 - 4x + 3$$

$$(x-3)(x-1)$$

$$x = -1$$

not

Possible

to plug into

denominator

(23)

$$\frac{10x(x-4)}{x} \cdot \frac{3x(x-4)}{1} \cdot \frac{(x+9)}{(x-4)} \cdot \frac{x(x-4)}{1} \quad \text{LCD} = x(x-4)$$

$$10(x-4) + 3(x^2 - 4x) = x^2 + 9x$$

$$10x - 40 + 3x^2 - 12x = x^2 + 9x$$

$$3x^2 - 2x - 40 = x^2 + 9x$$

$$2x^2 - 11x - 40 = 0$$

$$(2x + 5)(x - 8) = 0$$

$$x = -5/2$$

$$x = 8$$

(25)

I'm tired. Answers

$$x = 0$$

$$x = 7$$