

Math 20

Chapter 2 Review

$$\#1, 12^0 = 1$$

$$\#2, 4 \div 0 \text{ is } \underline{\text{undefined}}.$$

$$\#3, 0 \div 4 = 0$$

$$\begin{aligned} \#4, 21 - (-8) &= 21 + (+8) \\ &= 29 \end{aligned}$$

$$\begin{aligned} \#5, -21 - (-8) &= -21 + (+8) \\ &= -13 \end{aligned}$$

$$\#6, 21 + (-8) = 13$$

$$\begin{aligned} \#7, -21 - 8 &= -21 + (-8) \\ &= -29 \end{aligned}$$

$$\begin{aligned} \#8, 12 - 8 - (-2) &= 12 + (-8) + (+2) \\ &= 4 + 2 \\ &= 6 \end{aligned}$$

$$\begin{aligned} \#9, 8(2-7) - 6(1-2) &= 8(-5) - 6(-1) \\ &= -40 + (-6)(-1) \\ &= -40 + 6 \\ &= -34 \end{aligned}$$

check

$$\begin{aligned} 2-7 &= 2+(-7) \\ &= -5 \end{aligned}$$

$$\begin{aligned} 1-2 &= 1+(-2) \\ &= -1 \end{aligned}$$



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Alternate version

$$\begin{aligned}
 \#9. \quad 8(2-7) - 6(1-2) &= 8 \cdot [2 + (-7)] + (-6) \cdot [1 + (-2)] \\
 &= 8 \cdot [-5] + (-6) \cdot [-1] \\
 &= -40 + 6 \\
 &= -34
 \end{aligned}$$

Re-write

All subtractions  
as addition  
using opposites.

$$\begin{aligned}
 \#10. \quad (-6)(-2)(-3) &= 12 \cdot (-3) \\
 &= -36
 \end{aligned}$$

$$\begin{aligned}
 \#11. \quad (-2)^3 &= (-2)(-2)(-2) \\
 &= 4 \cdot (-2) \\
 &= -8
 \end{aligned}$$

$$\begin{aligned}
 \#12. \quad 2(-6) + 8(-1) &= -12 + (-8) \\
 &= -20
 \end{aligned}$$

$$\begin{aligned}
 \#13. \quad (2-3)(-3)(-2) &= [2 + (-3)](-3)(-2) && \text{or } = (-1)(6) \\
 &= (-1)(-3)(-2) && = -6 \\
 &= 3 \cdot (-2) \\
 &= -6
 \end{aligned}$$

$$\begin{aligned}
 \#14. \quad \frac{-7(2) - 6}{10} &= \frac{-14 + (-6)}{10} \\
 &= \frac{-20}{10} \\
 &= -2
 \end{aligned}$$



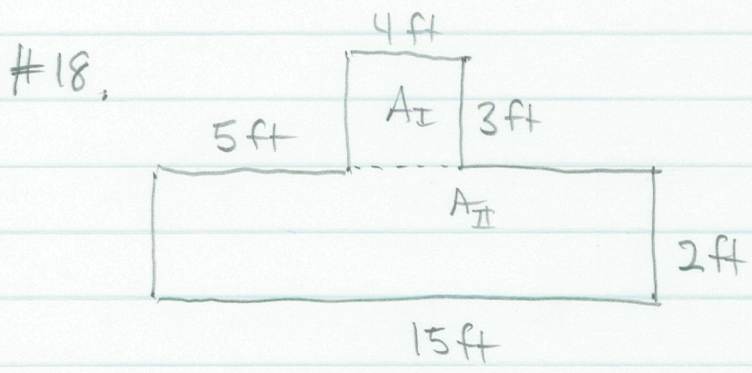
Math 20 Chapter 2 Review

#15.  $4(3x+7) = (4)(3x) + (4)(7)$   
 $= 12x + 28$

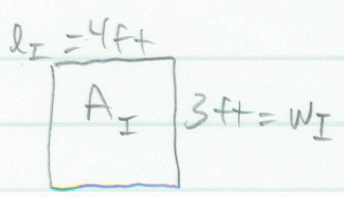
#16.  $6(7x-4) = (6)(7x) + (6)(-4)$   
 $= 42x + (-24)$   
 $= 42x - 24$

#17.  $6 \cdot 8^2 + 32 \div 8 - 2^2 = 6 \cdot 64 + 32 \div 8 - 2^2$   
 $= 6 \cdot 64 + 32 \div 8 - 4$   
 $= 384 + 32 \div 8 - 4$   
 $= 384 + 4 - 4$   
 $= 388 - 4$   
 $= 384$

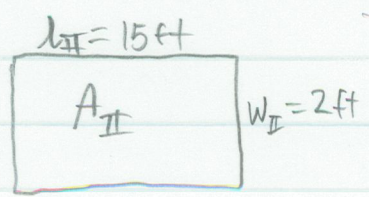
SDwk  
 $8^2 = 8 \cdot 8$   
 $= 64$   
 $2^2 = 2 \cdot 2$   
 $= 4$   
 $\frac{2}{64}$   
 $\frac{\times 6}{384}$



Total Area =  $A_I + A_{II}$   
 $= l_I \cdot w_I + l_{II} \cdot w_{II}$   
 $= (4ft)(3ft) + (15ft)(2ft)$   
 $= 12ft^2 + 30ft^2$   
 $= 42ft^2$



$A_I = l_I \cdot w_I$   
 $= (4ft)(3ft)$   
 $= 12ft^2$

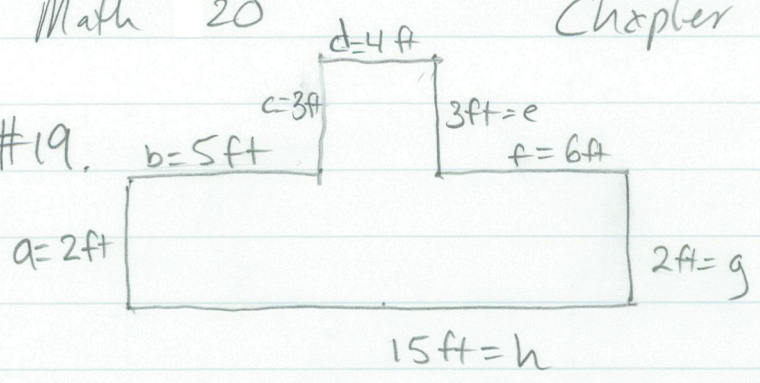


$A_{II} = l_{II} \cdot w_{II}$   
 $= (15ft)(2ft)$   
 $= 30ft^2$

ANS: The total area is 42 ft<sup>2</sup>.



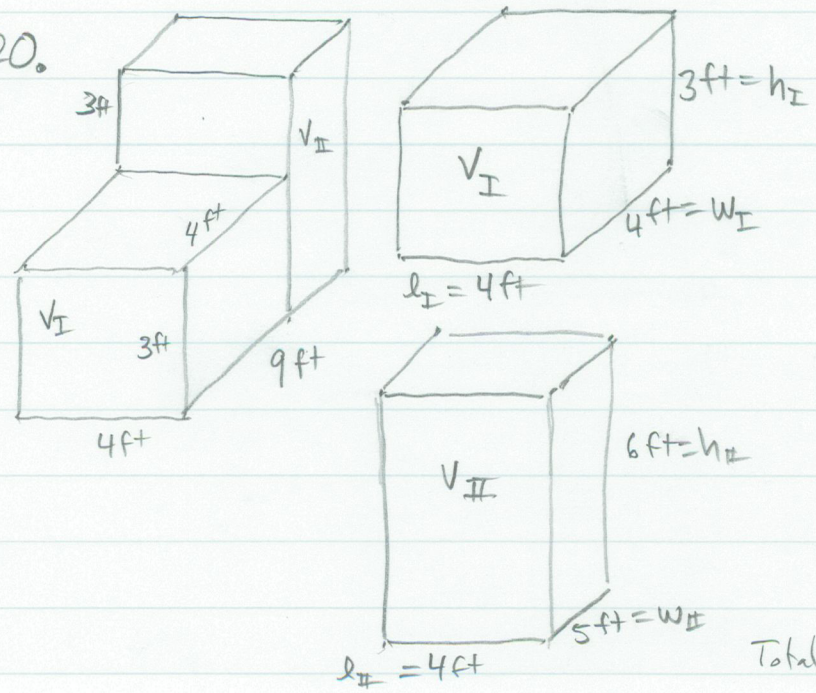
#19.



$$\begin{aligned} \text{Perimeter} &= a + b + c + d + e + f + g + h \\ &= (2\text{ft}) + (5\text{ft}) + (3\text{ft}) + (4\text{ft}) + (3\text{ft}) + (6\text{ft}) + (2\text{ft}) + (15\text{ft}) \\ &= 7\text{ft} + 7\text{ft} + 9\text{ft} + 17\text{ft} \\ &= 14\text{ft} + 26\text{ft} \\ &= 40\text{ft} \end{aligned}$$

ANS: The perimeter is 40 ft.

#20.



$$\begin{aligned} V_I &= l_I \cdot w_I \cdot h_I \\ V_I &= (4\text{ft}) \cdot (4\text{ft}) \cdot (3\text{ft}) \\ V_I &= 16 \cdot 3 \text{ft}^3 \\ V_I &= 48\text{ft}^3 \end{aligned}$$

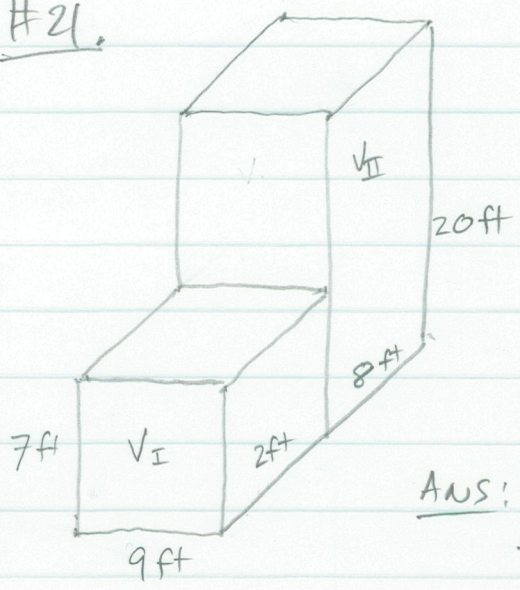
$$\begin{aligned} V_{II} &= l_{II} \cdot w_{II} \cdot h_{II} \\ V_{II} &= (4\text{ft}) \cdot (5\text{ft}) \cdot (6\text{ft}) \\ V_{II} &= 20 \cdot 6 \text{ft}^3 \\ V_{II} &= 120\text{ft}^3 \end{aligned}$$

$$\begin{aligned} \text{Total Volume} &= V_I + V_{II} = l_I \cdot w_I \cdot h_I + l_{II} \cdot w_{II} \cdot h_{II} \\ &= (4\text{ft})(4\text{ft})(3\text{ft}) + (4\text{ft})(5\text{ft})(6\text{ft}) \\ &= (48\text{ft}^3) + (120\text{ft}^3) \\ &= 168\text{ft}^3 \end{aligned}$$

ANS: The total volume is 168 ft<sup>3</sup>.

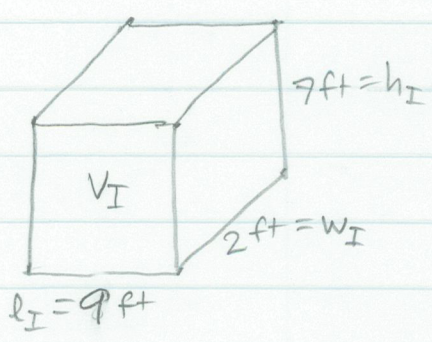


#21.

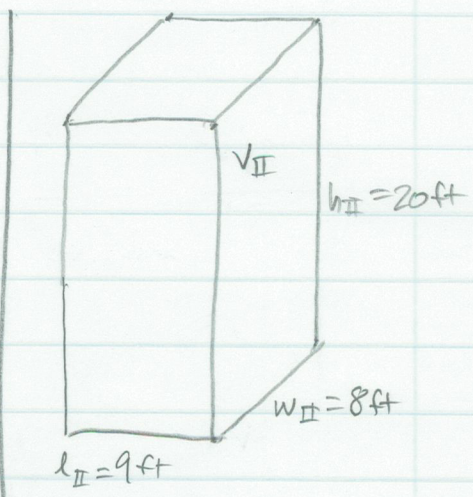


$$\begin{aligned}
 \text{Total Volume} &= V_I + V_{II} \\
 &= l_I \cdot w_I \cdot h_I + l_{II} \cdot w_{II} \cdot h_{II} \\
 &= (9\text{ft})(2\text{ft})(7\text{ft}) + (9\text{ft})(8\text{ft})(20\text{ft}) \\
 &= 126\text{ft}^3 + 1440\text{ft}^3 \\
 &= 1,566\text{ft}^3
 \end{aligned}$$

Ans: The total volume is 1,566 ft<sup>3</sup>.



$$\begin{aligned}
 V_I &= l_I \cdot w_I \cdot h_I \\
 &= (9\text{ft})(2\text{ft})(7\text{ft}) \\
 &= 126\text{ft}^3
 \end{aligned}$$



$$\begin{aligned}
 V_{II} &= l_{II} \cdot w_{II} \cdot h_{II} \\
 &= (9\text{ft})(8\text{ft})(20\text{ft}) \\
 &= 1440\text{ft}^3
 \end{aligned}$$

<u>SPWK</u>	
5	
18	
<u>x7</u>	
126	
72	
<u>x20</u>	
00	
1440	
<u>1440</u>	
1440	
+126	
<u>1566</u>	



Mixed-up Answers:  
Match each answer to the  
corresponding problem.

- a)  $12x + 28 \leftarrow \#15$
- b)  $13 \leftarrow \#6$
- c)  $-13 \leftarrow \#5$
- d)  $-20 \leftarrow \#12$
- e)  $-2 \leftarrow \#14$
- f)  $40 \text{ ft} \leftarrow \#19$
- g)  $-6 \leftarrow \#13$
- h)  $384 \leftarrow \#17$
- i)  $42 \text{ ft.}^2 \leftarrow \#18$
- j)  $-29 \leftarrow \#7$
- k)  $1 \leftarrow \#1$
- l)  $-36 \leftarrow \#10$
- m)  $29 \leftarrow \#4$
- n)  $-34 \leftarrow \#9$
- o) ~~undefined~~  $\leftarrow \#2$   $\#20$
- p)  $168 \text{ ft.}^3 \leftarrow \#20$
- q)  $-8 \leftarrow \#11$
- r)  $6 \leftarrow \#8$
- s)  $0 \leftarrow \#3$
- t)  $42x - 24 \leftarrow \#16$
- u)  $1566 \text{ ft.}^3 \leftarrow \#21$