Section 3.1 Exercises Part A

Find the Volume of a rectangular solid when the width, height, and length are given.
Formula is V=*l*wh

3.4

1. l = 4 in
   w = 2.5 in
   h = 3 in
   V =

2. l = 7 ft
   w = 4 ft
   h = 2.8 ft
   V =

3. l = 7.2 m
   w = 9 m
   h = 3 m
   V =

Find the Area of a trapezoid when the bases and height are given. Formula is
A = $\frac{1}{2}$ h(B+b)

4. B = 15
   b = 10
   h = 7
   A=

5. B = 21
   b = 11
   h = 3
   A=

6. B = 19
   b = 6
   h = 10
   A=

Simplify.

7. 2(3+x)+5(x-7)

8. 5(a-3b) − 4(a-5)

9. 3x+4y-7z+7y-3x+18z

10. 2s(t-7) − 6t(s+3)

11. $3(x^2$-5n) +3n − $7x^2$

12. 6kj − 7k +8kj +11

Solve.   Example:

4x + x − 7 = 1	
	Combine x's
5x − 7 = 1	+7 on both sides
5x = 8	
	Divide by 5 on both sides
x = $\frac{8}{5}$	

13. $5\left(\dfrac{3x-1}{7}+2\right)=35$

14. $3\left(\dfrac{-2x-8}{6}+7\right)-3=12$

15. -3 + m = 18

16. $\frac{7}{3}$ t = 14

17. -13 = 5x + 7

18. $\dfrac{5x-6}{4}=3$

19. $-\frac{3}{8}$ x − 4 = 20

20. 12 + 2p = 3

21. .4y = 78

Assignment 3.1a

22. $5x + 3 - 7x = 15$ **23.** $3x - 9 + 2x = -3$ **24.** $.3p + 5 = 19$

25. $-r + 9 = -15$ **26.** $4f + 9 = 9$ **27.** $\dfrac{2x+3}{5} = 11$

28. $t + t + 4t - 7 = 17$ **29.** $3\left(\dfrac{5x-8}{6} + 7\right) - 3 = 18$

Solve for the specified variable.

30. $y = mx + b$ for b   **31.** $\dfrac{5m-7}{3} = r$ for m

32. $A = 2\pi rh$ for h   **33.** $A = \frac{1}{2}bh$ for b

34. $C = \frac{5}{9}(F - 32)$ for F   **35.** $V = \frac{1}{3}\pi r^2 h$ for h

Preparation.

42. After reading some from the next section, try to solve this problem.
Two numbers add up to 94 and the first is 26 more than the second one. Find the two numbers.

43. Find the missing variable for a cone:
     $r = 9$
     $l =$
     $SA = 622.04$

Answers:

1. 30 in^3
2. 78.4 ft^3
3. 194.4 m^3
4. 87.5
5. 48
6. 125
7. $7x - 29$
8. $a - 15b + 20$
9. $11y + 11z$
10. $-4st - 14s - 18t$
11. $-4x^2 - 12n$
12. $14kj - 7k + 11$
13. $x = 12$
14. $x = 2$
15. $m = 21$
16. $t = 6$
17. $x = -4$
18. $x = \frac{18}{5}$ or 3.6
19. $x = -64$
20. $p = -\frac{9}{2}$
21. $y = 195$
22. $x = -6$
23. $x = \frac{6}{5}$ or 1.2
24. $p = 46.\overline{6}$
25. $r = 24$
26. $f = 0$
27. $x = 26$
28. $t = 4$

29. $x = \frac{8}{5}$ or 1.6
30. $b = y - mx$
31. $m = \dfrac{3r + 7}{5}$
32. $h = \dfrac{A}{2\pi r}$
33. $b = \dfrac{2A}{h}$
34. $F = \frac{9}{5}C + 32$
35. $h = \dfrac{3V}{\pi r^2}$