

Assign 20

NEW (No calc)

Book

Pg 285: 9-55 odd skip 2.7

9. $\sqrt{(-3)^2} = \sqrt{9} = \boxed{3}$ (principle root)

11. $\sqrt[5]{-32} = \boxed{-2}$

13. $\sqrt[3]{m^3} = \boxed{m}$

15. $-\sqrt{25x^6} = \boxed{-5x^3}$

17. $\sqrt{(3m-2n)^2} = \boxed{3m-2n}$

19. Find the principal third root of -125 $\rightarrow \sqrt[3]{-125} = \boxed{-5}$

21. $-\sqrt{144} = \boxed{-12}$

23. $\sqrt{.81} = \boxed{.9}$

25. $\sqrt[4]{625} = \boxed{5}$

~~27. $\sqrt[6]{(245)^6} = (245)^{6/6} = \sqrt[6]{345} = 18.577$~~

29. $\sqrt{16} = \boxed{4}$

31. $\sqrt{196} = \boxed{14}$

33. $\sqrt[4]{81} = \boxed{3}$

35. $\sqrt[4]{(-\frac{1}{2})^4} = \boxed{\frac{1}{2}}$ (principle root)

New cont

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37. $\sqrt[3]{1000} = \boxed{10}$

39. $\sqrt[3]{-.125} = \boxed{-.5}$

41. $\sqrt[3]{y^3} = \boxed{y}$

43. $-\sqrt[4]{x^4} = \boxed{-x}$

45. $\sqrt[3]{64g^6} = \boxed{4g^2}$

47. $\sqrt[3]{m^6n^9h^{12}} = \boxed{m^2n^3h^4}$

49. $\sqrt[3]{-27a^9b^{12}} = \boxed{-3a^3b^4}$

51. $\sqrt[3]{(s+t)^3} = \boxed{s+t}$

53. $-\sqrt{x^2+2x+1} = -\sqrt{(x+1)^2} = \boxed{-(x+1) \text{ or } -x-1}$

55. $\pm\sqrt{s^2-2st+t^2} = \pm\sqrt{(s-t)^2} = \boxed{\pm(s-t)}$

Review (no calc) packet

1. $\frac{1}{3} - \frac{3}{4} = \frac{4}{12} - \frac{9}{12} = \boxed{-\frac{5}{12}}$

2. $|9-2x| - 2 < -1$
+2 +2

$|9-2x| < 1$

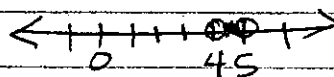
$9-2x < 1$
 $-9 \quad -9$

$-2x < -8$
 $\div -2 \quad \div -2$
 $x > 4$

$9-2x > -1$
 $-9 \quad -9$

$-2x > -10$
 $\div -2 \quad \div -2$
 $x < 5$

$\boxed{4 < x < 5}$



Review cont packet

Assign 20

cont

$$3. (-3ab)^3 (2b^3) = (-27a^3b^3)(2b^3) = \boxed{-54a^3b^6}$$

$$4. \frac{-4a^8b^3c^2}{28a^5b^6c^2} = \frac{-1a^3b^3b^6}{7} = \boxed{\frac{-a^3b^9}{7}}$$

$$5. \frac{(3c^{-2}d)^3}{4c^3d^4} = \frac{1}{(3c^{-2}d)^3(4c^3d^4)} = \frac{1}{(27c^{-6}d^3)(4c^3d^4)} = \frac{1}{108c^{-3}d^7} = \boxed{\frac{c^3}{108d^7}}$$

$$6. \frac{(c^2d)^{-3}c^{-5}}{(c^2d)^{-2}d^3} = \frac{c^{-6}d^{-3}c^{-5}}{c^{-4}d^3} = \frac{c^4}{c^6c^5d^3d^3} = \frac{c^4}{c^{11}d^6} = \boxed{\frac{1}{c^7d^6}}$$

$$7. \frac{x^{-3}y^2xy^4}{(x^{-2}y)^3y^{-3}x} = \frac{x^{-2}y^6}{x^{-6}y^3y^{-3}x} = \frac{x^6y^6y^3}{x^2y^3x} = \frac{x^6y^9}{x^3y^3} = \boxed{x^3y^6}$$

8. A bus seats 51 people and a van seats 8 people. We need to transport 150 students in 8 vehicles. How many buses and vans do we need?

x = bus y = van

$$x + y = 8 \rightarrow y = 8 - x$$

$$51x + 8y = 150 \quad y = 8 - 2$$

$$51x + 8(8 - x) = 150 \quad \boxed{y = 6}$$

$$51x + 64 - 8x = 150$$

$$\begin{array}{r} 43x = 86 \\ 43 \quad \quad 43 \end{array}$$

$$\boxed{x = 2}$$

We need 2 buses and 6 vans.

Review cont Packet

Assign 20 cont

9. $x = \text{Cabinet A}$ costs \$75 $.3 \text{ ft}^2$ 12 ft^3

$y = \text{Cabinet B}$ costs \$50 $.6 \text{ ft}^2$ 18 ft^3

- given \$600 to purchase

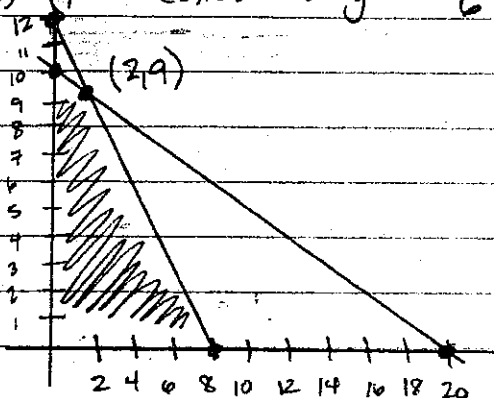
- has room for no more than 60 ft^2

$$x \geq 0 \quad y \geq 0 \quad f(x, y) = 12x + 18y$$

$$75x + 50y \leq 600 \rightarrow x\text{-int: } (8, 0) \quad y\text{-int: } (0, 12) \rightarrow y \leq \frac{600 - 75x}{50}$$

$$3x + 6y \leq 60 \rightarrow x\text{-int: } (20, 0) \quad y\text{-int: } (0, 10) \rightarrow y \leq \frac{60 - 3x}{6}$$

(x, y)	$12x + 18y$	$f(x, y) =$
$(0, 0)$	$12(0) + 18(0) =$	$f(0, 0) = 0$
$(8, 0)$	$12(8) + 18(0) = 96$	$f(8, 0) = 96$
$(2, 9)$	$12(2) + 18(9) =$	$f(2, 9) = 186$
$(0, 10)$	$12(0) + 18(10) =$	$f(0, 10) = 180$



You should buy 2 of cabinet A and 9 of cabinet B to maximize storage volume of 186 ft^3 .

Book (no calc)

pg 264: 26, 30, 42, 56, 66

26. $(-12y - 6y^2) + (-7y + 6y^2) = -12y - 6y^2 - 7y + 6y^2 = \boxed{-19y}$

30. $4a(3a^2b) = \boxed{12a^3b}$

42. $(2x+7)(3x+5) = 6x^2 + 10x + 21x + 35 = \boxed{6x^2 + 31x + 35}$

56. $(2g+1)(g-2)^2 = (2g+1)(g^2-4g+4) = 2g^3 - 8g^2 + 8g + g^2 - 4g + 4 = \boxed{2g^3 - 7g^2 + 4g + 4}$

Assign 20 cont

$$\begin{aligned} 66. & 2(rk)^2(5rt^2) - k(2rk)(2rt)^2 \\ & = (2r^2k^2)(5rt^2) - (2rk^2)(4r^2t^2) \\ & = 10r^3k^2t^2 - 8r^3k^2t^2 \\ & = \boxed{2r^3k^2t^2} \end{aligned}$$

pg 278: 12, ~~14~~, 16, 24, 26, 28, 32, 34, 36, 42

$$12. a^2 + 5a + 6 = \boxed{(a+3)(a+2)}$$

$$\textcircled{14.} \cancel{2r^3 - 10s^3}$$

$$16. 21 - 7y + 3x - xy = 7(3-y) + x(3-y) = \boxed{(7+x)(3-y)}$$

$$24. 12ab^3 - 8a^2b^2 + 10a^3b^3 = \boxed{2ab^2(bb - 4a + 5a^2b)}$$

$$26. x^2 - 5x + 4 = \boxed{(x-4)(x-1)}$$

$$\begin{aligned} 28. & 6m^2 + 13m + 6 = 6m^2 + 9m + 4m + 6 \\ & \quad \frac{9 \cdot 4 = 36}{9+4=13} \quad = 3m(2m+3) + 2(2m+3) \\ & \quad = \boxed{(2m+3)(3m+2)} \end{aligned}$$

$$\begin{aligned} 32. & a^2 + 8ab + 16b^2 = \boxed{(a+4b)(a+4b) \text{ or}} \\ & \quad = \boxed{(a+4b)^2} \end{aligned}$$

$$\begin{aligned} 34. & 2x^2 + 3x + 1 = 2x^2 + 2x + 1x + 1 \\ & \quad \frac{2 \cdot 1 = 2}{2+1=3} \quad = 2x(x+1) + 1(x+1) \\ & \quad = \boxed{(x+1)(2x+1)} \end{aligned}$$

$$\begin{aligned} 36. & 2a^2 + 13a - 7 = 2a^2 + 14a - a - 7 \\ & \quad \frac{14 \cdot -1 = -14}{14+1=13} \quad = 2a(a+7) - 1(a+7) = \boxed{(2a-1)(a+7)} \end{aligned}$$

Assign 20 cont

$$42. \quad 10w^2 - 14wv - 15w + 21v$$

$$= 10w^2 - 15w - 14wv + 21v$$

$$= 5w(2w - 3) - 7v(2w - 3)$$

$$= \boxed{(5w - 7v)(2w - 3)}$$