

Review Unit 3 # 2

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63. m^7

64. $y^{-5} = \frac{1}{y^5}$

66. $m^{-5} = \frac{1}{m^5}$

69. $x^{+4}y^{-6}$
 $= \frac{x^4}{y^6}$

71. $\frac{x^6}{y^4}$

72. $10x^5y^7$

73. $9ab$

76. $4a^{10}b^6$

77. $(-3)^{-3}m^9n^3$
 $= \frac{m^9n^3}{-27}$ ou $\frac{-m^9n^3}{27}$

79. $\left(\frac{3y^{-4}}{-2x^{-3}}\right)^2$
 $= \frac{9y^{-8}}{4x^{-6}}$
 $= \frac{9x^6}{4y^8}$

80. $\frac{18x^4y^5}{-9xy^2}$
 $= -2x^3y^3$

82. $\frac{-10s^{-5}t^3}{4s^2t^{-3}}$
 $= \frac{-5s^{-7}t^6}{2}$
 $= \frac{-5t^6}{2s^7}$

84. $\sqrt{6}$

85. $\frac{1}{\sqrt{5}}$

86. $\sqrt[5]{7^3}$ ou $(\sqrt[5]{7})^3$

88. $(-8)^{\frac{1}{3}}$

89. $m^{\frac{5}{3}}$

90. $x^{\frac{2}{3}}$

94. $\frac{1}{49^{\frac{1}{2}}}$
 $= \frac{1}{\sqrt{49}}$
 $= \frac{1}{7}$

97. $\frac{1}{(-8)^{\frac{1}{3}}}$
 $= \frac{1}{\sqrt[3]{-8}}$
 $= \frac{1}{-2}$

99. $(\sqrt[3]{27})^2$
 $= (3)^2$
 $= 9$

$$\begin{aligned}
 103. \quad & \left(\frac{125}{27} \right)^{\frac{2}{3}} \\
 & = \left(\sqrt[3]{\frac{125}{27}} \right)^2 \\
 & = \left(\frac{5}{3} \right)^2 \\
 & = \frac{25}{9}
 \end{aligned}$$

$$\begin{aligned}
 105. \quad & \left(-\frac{1}{8} \right)^{-\frac{1}{3}} \\
 & = \left(\frac{-8}{-1} \right)^{\frac{1}{3}} \\
 & = \sqrt[3]{\frac{-8}{-1}} \\
 & = \frac{2}{-1} \text{ ou } -2
 \end{aligned}$$

$$\begin{aligned}
 107. \quad & \left((y^4)^{\frac{1}{3}} \right)^{\frac{1}{2}} \\
 & = y^{\frac{4}{6}} \\
 & = y^{\frac{2}{3}}
 \end{aligned}$$

$$\begin{aligned}
 108. \quad & ((81m^8)^{\frac{1}{2}})^{\frac{1}{2}} \\
 & = 81^{\frac{1}{4}} m^{\frac{8}{4}} \\
 & = \sqrt[4]{81} m^2 \\
 & = 3m^2
 \end{aligned}$$

$$\begin{aligned}
 109. \quad & \sqrt[3]{-8m} \\
 & = \sqrt[3]{-8} m^{\frac{1}{3}} \\
 & = -2m^{\frac{1}{3}}
 \end{aligned}$$

38. $-1 \cdot 4^{-2}$

$$= \frac{-1}{4^2}$$

$$= \frac{-1}{16}$$

39. 6^1

$$= 6$$

40. $\frac{1}{25}$

44. $(5)^{-2} x^4 y^{-8}$

$$= \frac{x^4}{25y^8}$$

46. $\left(\frac{t^3}{s^{-2}}\right)^3$

$$= \frac{t^9}{s^{-6}}$$

$$= t^9 s^6$$

49. $-6m^{-1}$

$$= \frac{-6}{m}$$

50. $\frac{8x^{-4}}{-2x^{-1}}$

$$= -4x^{-3}$$

$$= \frac{-4}{x^3}$$

54. $\frac{1}{-s^2 t^{-1} (-4s^{-2} t^{-3})}$

$$= \frac{1}{4s^0 t^{-4}}$$

$$= \frac{t^4}{4}$$

56. $(\sqrt[3]{6})^2$ ou $\sqrt[3]{6^2}$

57. $\frac{1}{\sqrt{3^5}}$ ou $\frac{1}{(\sqrt{3})^5}$

58. $5^{\frac{2}{3}}$

59. $x^{\frac{5}{2}}$

62. $\frac{1}{4^{\frac{1}{2}}}$

$$= \frac{1}{\sqrt{4}}$$

$$= \frac{1}{2}$$

66. $((81)^{\frac{1}{2}})^{\frac{1}{2}}$

$$= 81^{\frac{1}{4}}$$

$$= \sqrt[4]{81}$$

$$= 3$$

69. $((a^4)^{\frac{1}{3}})^{\frac{1}{2}}$

$$= a^{\frac{4}{6}}$$

$$= a^{\frac{2}{3}}$$