

# כפל והיסוק של שברים עם כרמטורים:

פתור את התרגילים הבאים:

$$54. \frac{3}{5} \cdot \frac{3}{z} = \frac{9}{5z}$$

$$55. \frac{2a}{3} \cdot -\frac{b}{4} = -\frac{2ab}{12} = -\frac{ab}{6}$$

$$56. \frac{x}{2} \cdot \frac{9}{y} = \frac{9x}{2y}$$

$$57. -\frac{12b}{17x} \cdot \frac{17}{11} = -\frac{12b}{11x}$$

$$58. \frac{x}{4y} \cdot -4\frac{4}{3} = \frac{x}{4y} \cdot \frac{-(4 \cdot 3 + 4)}{3} = \frac{x}{4y} \cdot -\frac{16}{3} = -\frac{16x}{4y \cdot 3} = -\frac{4x}{3y}$$

$$59. \frac{a}{b} \cdot \frac{b}{a} = 1$$

$$60. \frac{3}{7} \cdot \frac{x}{y} \cdot -\frac{5}{6a} = \frac{3 \cdot x \cdot (-5)}{7 \cdot y \cdot 6a} = -\frac{5x}{2ay}$$

$$61. \frac{5x}{a} \cdot -\frac{6a}{3b} \cdot -\frac{1}{5c} = \frac{5x \cdot (-6a) \cdot (-1)}{a \cdot 3b \cdot 5c} = \frac{x \cdot (-2) \cdot (-1)}{bc} = \frac{2x}{bc}$$

פתור את התרגילים הבאים:

$$62. \frac{1}{3} \div \frac{1}{x} = \frac{1}{3} \cdot \frac{x}{1} = \frac{x}{3}$$

$$63. \frac{5}{6} \div \frac{10}{3x} = \frac{5}{6} \cdot \frac{3x}{10} = \frac{x}{2 \cdot 2} = \frac{x}{4}$$

$$64. \frac{1}{xyz} \div \frac{1}{xyz} = \frac{1}{xyz} \cdot \frac{xyz}{1} = 1$$

$$65. \frac{x}{6} \div \left(-\frac{2}{7}\right) = \frac{x}{6} \cdot -\frac{7}{2} = -\frac{7x}{12}$$

$$66. \frac{5m}{8} \div \frac{3m}{16} = \frac{5m}{8} \cdot \frac{16}{3m} = \frac{5 \cdot 2}{3} = \frac{10}{3}$$

$$67. -\frac{a}{b} \div 2\frac{1}{3} = -\frac{a}{b} \cdot \frac{7}{5} = -\frac{a}{b} \cdot \frac{17}{5} = -\frac{a \cdot 17}{b \cdot 5} = -\frac{17a}{5b}$$

$$68. \frac{y}{3} \div \frac{y}{x} = \frac{y}{3} \cdot \frac{x}{y} = \frac{x}{3}$$

$$69. \frac{a}{c} \div \frac{d}{b} = \frac{a}{c} \cdot \frac{b}{d} = \frac{ab}{cd}$$

$$70. -\frac{3b}{7} \div \frac{2ab}{7} = -\frac{3b}{7} \cdot \frac{7}{2ab} = -\frac{27}{2a}$$

$$71. -\frac{5a}{2b} \div -\frac{2x}{3by} = \frac{-5a}{2b} \cdot \frac{3y}{2bx} = \frac{-15ay}{2bx}$$

$$72. \left(\frac{x}{5}\right) = \frac{1 \cdot 3}{5 \cdot x} = \frac{3}{5x}$$

$$73. \frac{a}{\frac{1}{4}} = \frac{a}{\left(\frac{1}{4}\right)} = \frac{4 \cdot a}{3 \cdot 1} = \frac{4a}{3}$$

$$74. \frac{6}{\frac{a}{2b}} = \frac{6}{\left(\frac{a}{2b}\right)} = \frac{6 \cdot 1}{2b \cdot a} = \frac{6}{2ab} = \frac{3}{ab}$$

$$75. \left(\frac{\frac{2a}{3b}}{\frac{3a}{4}}\right) = \frac{2a \cdot 3a}{24 \cdot 3b} = \frac{a^2}{2b}$$

$$76. \frac{x}{\frac{3y}{\frac{1}{4-2}}} = \frac{x}{\frac{3y}{\frac{1}{2}}} = \left(\frac{x}{\frac{3y}{2}}\right) = \frac{2 \cdot x}{3y \cdot 2} = \frac{2x}{27y}$$

$$77. \frac{\frac{5y}{11}}{5xy} = \left(\frac{\frac{5y}{11}}{5xy}\right) = \frac{5y \cdot 1}{11 \cdot 5xy} = \frac{1}{11x}$$

$$78. \frac{7ab}{\frac{3}{1-\frac{1}{5}}} = \frac{7ab}{\left(\frac{1}{1-\frac{1}{5}}\right)} = \frac{7ab}{\left(\frac{1}{\frac{4}{5}}\right)} = \frac{7ab \cdot 5}{8 \cdot 1} = \frac{35ab}{8}$$

$$79. \left(\frac{\frac{5a}{7b}}{\frac{4c}{9d}}\right) = \frac{5a \cdot 9d}{7b \cdot 4c} = \frac{45ad}{28bc}$$