

-1. Work out the quotients:

$1 \div 1$

1

$1 \div 2$

$\frac{1}{2}$

$1 \div 3$

$\frac{1}{3}$

$1 \div 4$

$\frac{1}{4}$

$2 \div 1$

2

$2 \div 2$

1

$2 \div 3$

$\frac{2}{3}$

$2 \div 4$

$\frac{1}{2}$

$3 \div 1$

3

$3 \div 2$

$\frac{3}{2}$

$3 \div 3$

1

$3 \div 4$

$\frac{3}{4}$

$4 \div 1$

4

$4 \div 2$

2

$4 \div 3$

$\frac{4}{3}$

$4 \div 4$

1

$5 \div 1$

5

$5 \div 2$

$\frac{5}{2}$

$5 \div 3$

$\frac{5}{3}$

$5 \div 4$

$\frac{5}{4}$

$4 \div 5$

$\frac{4}{5}$

$4 \div 6$

$\frac{2}{3}$

$4 \div 7$

$\frac{4}{7}$

$4 \div 8$

$\frac{1}{2}$

$5 \div 5$

1

$5 \div 6$

$\frac{5}{6}$

$5 \div 7$

$\frac{5}{7}$

$5 \div 8$

$\frac{5}{8}$

0. Simplify the fractions:

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

$$\frac{4}{1}$$

$$\frac{6}{1}$$

$$\frac{8}{1}$$

2

4

6

8

$$\frac{2}{2}$$

$$\frac{4}{2}$$

$$\frac{6}{2}$$

$$\frac{8}{2}$$

1

2

3

4

$$\frac{2}{6}$$

$$\frac{4}{6}$$

$$\frac{6}{6}$$

$$\frac{8}{6}$$

$$\frac{1}{3}$$

$$\frac{2}{3}$$

1

$$\frac{4}{3}$$

$$\frac{10}{6}$$

$$\frac{20}{6}$$

$$\frac{30}{6}$$

$$\frac{40}{6}$$

$$\frac{5}{3}$$

$$\frac{10}{3}$$

5

$$\frac{20}{3}$$

$$\frac{10}{42}$$

$$\frac{20}{42}$$

$$\frac{30}{42}$$

$$\frac{40}{42}$$

$$\frac{5}{21}$$

$$\frac{10}{21}$$

$$\frac{5}{7}$$

$$\frac{20}{21}$$

1. Fill in the missing numbers:

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

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

$$\frac{3}{1} = \frac{3}{1}$$

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

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

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

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

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

$$\frac{3}{1} = \frac{6}{2}$$

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

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

$$\frac{6}{2} = \frac{3}{1}$$

$$\frac{1}{1} = \frac{3}{3}$$

$$\frac{2}{1} = \frac{6}{3}$$

$$\frac{3}{1} = \frac{9}{3}$$

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

$$\frac{4}{2} = \frac{6}{3}$$

$$\frac{6}{2} = \frac{9}{3}$$

$$\frac{3}{6} = \frac{1}{2}$$

$$\frac{6}{6} = \frac{2}{2}$$

$$\frac{9}{6} = \frac{3}{2}$$

$$\frac{2}{2} = \frac{6}{6}$$

$$\frac{4}{2} = \frac{12}{6}$$

$$\frac{6}{2} = \frac{18}{6}$$

$$\frac{3}{6} = \frac{6}{12}$$

$$\frac{6}{6} = \frac{12}{12}$$

$$\frac{9}{6} = \frac{18}{12}$$

$$\frac{3}{2} = \frac{9}{6}$$

$$\frac{5}{2} = \frac{15}{6}$$

$$\frac{7}{2} = \frac{21}{6}$$

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

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

$$\frac{3}{1} = \frac{3}{1}$$

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

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

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

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

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

$$\frac{3}{1} = \frac{6}{2}$$

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

$$\frac{8}{2} = \frac{4}{1}$$

$$\frac{12}{2} = \frac{6}{1}$$

$$\frac{1}{1} = \frac{3}{3}$$

$$\frac{2}{1} = \frac{6}{3}$$

$$\frac{3}{1} = \frac{9}{3}$$

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

$$\frac{4}{2} = \frac{6}{3}$$

$$\frac{6}{2} = \frac{9}{3}$$

$$\frac{9}{6} = \frac{3}{2}$$

$$\frac{18}{6} = \frac{6}{2}$$

$$\frac{27}{6} = \frac{9}{2}$$

$$\frac{2}{2} = \frac{6}{6}$$

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

$$\frac{6}{6} = \frac{6}{6}$$

$$\frac{3}{6} = \frac{6}{12}$$

$$\frac{6}{12} = \frac{6}{12}$$

$$\frac{9}{18} = \frac{6}{12}$$

$$\frac{3}{2} = \frac{6}{4}$$

$$\frac{5}{2} = \frac{10}{4}$$

$$\frac{7}{2} = \frac{21}{6}$$

2. Evaluate the expressions

0^0

1

0^1

0

0^2

0

0^3

0

1^0

1

1^1

1

1^2

1

1^3

1

2^0

1

2^1

2

2^2

4

2^3

8

3^0

1

3^1

3

3^2

9

3^3

27

4^0

1

4^1

4

4^2

16

4^3

64

$\frac{1^1}{1^1}$

1

$\frac{1^2}{1^1}$

1

$\frac{1^3}{1^1}$

1

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

1

$\frac{2^1}{1^1}$

2

$\frac{2^2}{1^1}$

4

$\frac{2^3}{1^1}$

8

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

16

$$\frac{1^1}{2^1}$$

$$\frac{1^2}{2^1}$$

$$\frac{1^3}{2^1}$$

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

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

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

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

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

$$\frac{2^1}{2^1}$$

$$\frac{2^2}{2^1}$$

$$\frac{2^3}{2^1}$$

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

$$\mathbf{1}$$

$$2$$

$$4$$

$$8$$

$$\frac{1^1}{2^2}$$

$$\frac{1^2}{2^2}$$

$$\frac{1^3}{2^2}$$

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

$$\frac{1}{4}$$

$$\frac{1}{4}$$

$$\frac{1}{4}$$

$$\frac{1}{4}$$

$$\frac{2^1}{2^2}$$

$$\frac{2^2}{2^2}$$

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

$$\frac{2^4}{2^2}$$

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

$$1$$

$$2$$

$$4$$

$$\frac{1^1+1}{2^2}$$

$$\frac{1^2+1}{2^2}$$

$$\frac{1^3+1}{2^2}$$

$$\frac{1^4+1}{2^2}$$

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

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

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

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

$$\frac{2^1+1}{2^2}$$

$$\frac{2^2+1}{2^2}$$

$$\frac{2^3+1}{2^2}$$

$$\frac{2^4+1}{2^2}$$

$$\frac{3}{4}$$

$$\frac{5}{4}$$

$$\frac{9}{4}$$

$$\frac{17}{4}$$

$$\frac{1^1+2}{2^2}$$

$$\frac{1^2+2}{2^2}$$

$$\frac{1^3+2}{2^2}$$

$$\frac{1^4+2}{2^2}$$

$$\frac{3}{4}$$

$$\frac{3}{4}$$

$$\frac{3}{4}$$

$$\frac{3}{4}$$

$$\frac{2^1+2}{2^2}$$

$$\frac{2^2+2}{2^2}$$

$$\frac{2^3+2}{2^2}$$

$$\frac{2^4+2}{2^2}$$

$$1$$

$$\frac{3}{2}$$

$$\frac{5}{2}$$

$$\frac{9}{2}$$

$$\frac{1^1+1}{2^2+1}$$

$$\frac{1^2+1}{2^2+1}$$

$$\frac{1^3+1}{2^2+1}$$

$$\frac{1^4+1}{2^2+1}$$

$$\frac{2}{5}$$

$$\frac{2}{5}$$

$$\frac{2}{5}$$

$$\frac{2}{5}$$

$$\frac{2^1+1}{2^2+3^2}$$

$$\frac{2^2+1}{2^2+3^2}$$

$$\frac{2^3+1}{2^2+3^2}$$

$$\frac{2^4+1}{2^2+3^2}$$

$$\frac{3}{13}$$

$$\frac{5}{13}$$

$$\frac{9}{13}$$

$$\frac{17}{13}$$

$$\frac{1^1+2}{2^2 \times 3}$$

$$\frac{1^2+2}{2^2 \times 3}$$

$$\frac{1^3+2}{2^2 \times 3}$$

$$\frac{1^4+2}{2^2 \times 3}$$