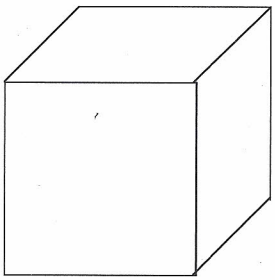
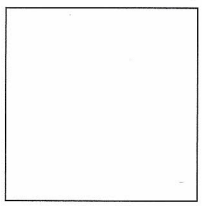
Label each diagram as a power of 10.

1.



10^3



_____

_____

_____

Fill in the blanks.

2. 10^6 = _____

3. 10^1 = _____

4. 10^4 = _____

5. 10^5 = _____

6. 10,000 = 10—

7. 1,000,000 = 10—

8. 10 = 10—

9. 100 = 10—

Write the numbers first in expanded notation, and then in exponential notation. The first one is done for you.

10. $132 = 1 \times 100 + 3 \times 10 + 2 \times 1$

$1 \times 10^2 + 3 \times 10^1 + 2 \times 10^0$

11. $276 =$ _____

_____

12. $1{,}409 =$ _____

_____

13. $31{,}500 =$ _____

_____

Express as a number (standard notation).

14. $8 \times 1{,}000 + 4 \times 100 + 3 \times 1 =$ _____

15. $7 \times 10{,}000 + 6 \times 10 =$ _____

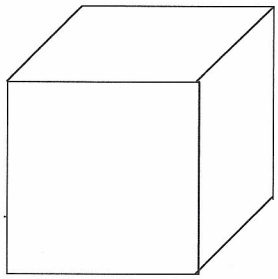
16. $4 \times 10^3 + 9 \times 10^2 + 6 \times 10^1 + 2 \times 10^0 =$ _____

17. $3 \times 10^3 + 5 \times 10^2 + 3 \times 10^1 =$ _____

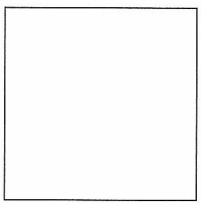
18. $5 \times 10^4 + 2 \times 10^3 + 1 \times 10^2 + 7 \times 10^1 + 4 \times 10^0 =$ _____

Label each diagram as a power of 10.

1.



_____



_____

_____

10^0

Fill in the blanks.

2. 10^2 = _____

3. 10^5 = _____

4. 10^3 = _____

5. 10^6 = _____

6. 1 = 10—

7. 100 = 10—

8. 10,000 = 10—

9. 1,000 = 10—

Write the numbers first in expanded notation, and then in exponential notation.

10. 4,836 = _____

_____

11. 600,275 = _____

_____

12. 384 = _____

_____

13. 50 = _____

_____

Express as a number (standard notation).

14. $9 \times 1{,}000 + 3 \times 100 + 4 \times 10 + 9 \times 1 =$ _____

15. $6 \times 10^2 + 1 \times 10^1 + 7 \times 10^0 =$ _____

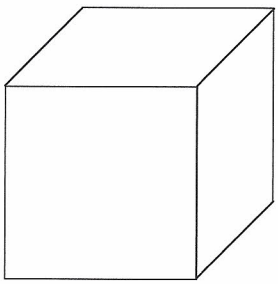
16. $4 \times 10{,}000 + 7 \times 100 + 3 \times 1 =$ _____

17. $2 \times 10^3 + 8 \times 10^2 + 7 \times 10^1 + 4 \times 10^0 =$ _____

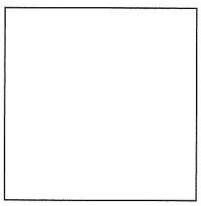
18. $1 \times 10^4 + 2 \times 10^3 + 2 \times 10^2 + 1 \times 10^1 + 1 \times 10^0 =$ _____

Label each diagram as a power of 10.

1.



_____



_____

10^1

_____

Fill in the blanks.

2. 10^4 = _____

3. 10^2 = _____

4. 10^6 = _____

5. 10^0 = _____

6. 100,000 = 10—

7. 10 = 10—

8. 1,000 = 10—

9. 1,000,000 = 10—

Write the numbers first in expanded notation, and then in exponential notation.

10. 702 = _____

_____

11. 11,608 = _____

_____

12. 8,000,000 = _____

_____

13. 48 = _____

_____

Express as a number (standard notation.)

14. $5 \times 1{,}000 + 6 \times 100 + 7 \times 1$ = _____

15. $1 \times 10^3 + 9 \times 10^2 + 8 \times 10^1$ = _____

16. $7 \times 100{,}000 + 7 \times 10{,}000$ = _____

17. $3 \times 10^6 + 6 \times 10^5 + 1 \times 10^4$ = _____

18. $2 \times 10^5 + 1 \times 10^4 + 6 \times 10^3 + 5 \times 10^2 + 3 \times 10^1 + 4 \times 10^0$ = _____

Fill in the blanks.

1. 10^4 = _____

2. 10^2 = _____

3. 10^3 = _____

4. 1 = 10 —

5. 100 = 10 —

6. 10,000 = 10 —

Write the numbers first in expanded notation, and then in exponential notation.

7. 3,766 = _____

_____

8. 51,017 = _____

_____

Express in standard notation.

9. 6 x 1,000 + 2 x 100 + 2 x 10 = _____

10. 1 x 10,000 + 9 x 100 + 1 x 1 = _____

Fill in the blanks.

11. 1^2 = ____

12. 2— = 8

13. 2^4 = ____

QUICK REVIEW

When the numerator and denominator of a fraction are multiplied by the same number, the resulting fraction is "equivalent." It has the same value as the original fraction but is expressed in a different form.

EXAMPLE 1 $\frac{1}{2}\ \frac{x2}{x2} = \frac{2}{4}$ $\frac{1}{2}\ \frac{x3}{x3} = \frac{3}{6}$ $\frac{1}{2}\ \frac{x4}{x4} = \frac{4}{8}$

EXAMPLE 2 $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$

You could continue to find as many equivalent fractions for 1/2 as you wish.

Fill in the missing numbers to make equivalent fractions.

14. $\frac{1}{3} = \frac{\quad}{6} = \frac{\quad}{9} = \frac{4}{\quad}$

15. $\frac{2}{5} = \frac{4}{\quad} = \frac{6}{15} = \frac{\quad}{20}$

16. Ivan went to the ocean and spotted 42 shore birds. Five-sevenths of them were ducks. How many ducks is that?

17. Isaac noticed that one-fourth of the months of the year start with the same letter. Which letter is that and how many times does it appear?

18. There are 24 students in the class. Five-sixths of them are right-handed. How many are left-handed?

Fill in the blanks.

1. 10^0 = _____

2. 10^3 = _____

3. 10^1 = _____

4. 10 = 10—

5. 1,000 = 10—

6. 1 = 10—

Write the numbers first in expanded notation, and then in exponential notation.

7. 748 = _____

_____

8. 12,468 = _____

_____

Express in standard notation.

9. $8 \times 10^3 + 4 \times 10^2 + 3 \times 10^1 + 7 \times 10^0$ = _____

10. $6 \times 10^4 + 2 \times 10^2 + 9 \times 10^1 + 4 \times 10^0$ = _____

Fill in the blanks.

11. 7— = 49

12. 54^1 = ____

13. 3^3 = ____

Fill in the missing numbers to make equivalent fractions.

14. $\frac{5}{6} = \frac{\quad}{12} = \frac{\quad}{18} = \frac{20}{\quad}$

15. $\frac{1}{4} = \frac{2}{\quad} = \frac{3}{12} = \frac{\quad}{16}$

16. $\frac{3}{8} = \frac{\quad}{\quad} = \frac{\quad}{24} = \frac{12}{\quad}$

17. $\frac{6}{7} = \frac{12}{\quad} = \frac{\quad}{21} = \frac{\quad}{\quad}$

18. Audrey sleeps 5/12 of the day. Since there are 24 hours in a day, how many hours is she snoozing?

19. Heidi likes Georgia because it is cold only one-fourth of the year. How many cold months are there in Georgia?

20. Three-fourths of the days in February were below freezing. How many days were below 32°F? (It was not a leap year.)

Fill in the blanks.

1. 10^5 = _____

2. 10^4 = _____

3. 10^2 = _____

4. 1,000 = 10—

5. 10,000 = 10—

6. 100 = 10—

Write the numbers first in expanded notation, and then in exponential notation.

7. 5,889 = _____

_____

8. 60,410 = _____

_____

Express in standard notation.

9. 7 x 1,000 + 2 x 100 + 6 x 10 = _____

10. $5 \times 10^4 + 5 \times 10^3 + 7 \times 10^0$ = _____

Fill in the blanks.

11. 9^2 = ____

12. 1^5 = ____

13. 2— = 16

Fill in the missing numbers to make equivalent fractions.

14. $\frac{2}{3} = \frac{\quad}{6} = \frac{\quad}{9} = \frac{8}{\quad}$

15. $\frac{3}{5} = \frac{6}{\quad} = \frac{\quad}{15} = \frac{\quad}{20}$

16. $\frac{1}{9} = \frac{\quad}{\quad} = \frac{\quad}{27} = \frac{4}{\quad}$

17. $\frac{7}{10} = \frac{14}{\quad} = \frac{\quad}{30} = \frac{\quad}{\quad}$

18. Clyde called Joseph and talked to him for two-thirds of an hour. How many minutes did they talk?

19. Bailey planted 75 bean seeds. Four-fifths of them have sprouted. How many bean plants have started to grow?

20. Kelly shipped out 30 packages of math materials. One-tenth of them were damaged in the mail. How many were damaged? How many packages made it safely to their destination?