

GRADE 6 LESSON 1
NUMBERS UP TO 1,000,000.

1. Rewrite as numbers only: 458 thousand and 15; 19 thousand and 999; 300 thousand.

Write the numbers that come right before and right after each one of the numbers above.

2. Write 6 numbers, starting with 199,985, with every subsequent number being 5 more than the previous one.
3. Which number should be added to 167,689, to obtain 168 thousand.
4. Round the numbers 85,647 and 507,478
- a) to tenth
 - b) to hundreds
 - c) to thousands
 - d) to ten thousands
5. An adult elephant weighs 4,800 kg, while the baby elephant weighs 4 times less. What is their total weight? Create an algebraic expression, then solve.
6. Find the value of the expression $m - (20,745 - k)$ where

$$m = 780,056, \quad k = 1,645$$

Answers: 1 a) 458,015 (458,014 and 458,016) b) 19,999 (19,998 and 20,000) c) 300,000 (299,999 and 300,001)
2 199,985 199,990 199,995 200,000 200,005
3 211
4 a) 85,650 507,480 b) 85,700 507,500 c) 86,000 507,000 d) 90,000 510,000
5 1200 kg
6 760,956

GRADE 6 LESSON 2
BREAKING DOWN NATURAL NUMBERS.

1. Evaluate:

a) $10 + 4^2$;

b) $100 - 6^2$;

c) $3^2 + 2^3$;

d) $10^3 \div 2^2$.

2. Write down all of the natural numbers that are less than 20.

3. Determine all possible factors of 28 and 42. Identify any common factors and state the greatest one of them.

4. Break each of the following numbers down into their prime factors:

36, 50, 100, 210.

5. Determine the greatest common factor (GCF):

a) 40 i 64;

b) 50 i 175;

c) 100 i 360.

6. Determine the least common multiple (LCM):

a) 12 i 18;

b) 9 i 14;

c) 36 i 48.

7. 72 sandwiches and 48 cookies were evenly split among the students. How many students are there in the class, if there are more than 20?

Answers: 1 a) 26 b) 64 c) 17 d) 250

2 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19

3 28: 1 and 28, 2 and 14, 4 and 7 42: 1 and 42, 2 and 21, 3 and 14, 6 and 7

GCF: 14

4 36: $3 \times 3 \times 2 \times 2$ 50: $2 \times 5 \times 5$ 100: $2 \times 2 \times 5 \times 5$ 210: $2 \times 3 \times 5 \times 7$

5 a) 8 b) 25 c) 20

6 a) 36 b) 126 c) 144

7 24 students

GRADE 6 LESSON 3
FRACTION PROPERTIES. COMPARING FRACTIONS.

1. Draw two stripes 16 cm each. Explain what $\frac{3}{8}$ of a stripe and $\frac{3}{4}$ of a stripe mean. Colour the fractions in and compare their lengths.

2. Write the following quotients as fractions: $3 \div 8$, $12 \div 32$, $20 \div 36$, $10 \div 18$.
Which of the fractions are equivalent?

3. Reduce the fractions: $\frac{15}{10}$, $\frac{21}{35}$, $\frac{18}{81}$, $\frac{21}{12}$, $\frac{12}{14}$. Write improper fractions as mixed numbers.

4. Set each fraction to the denominator 100: $\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{5}$, $\frac{3}{10}$, $\frac{7}{20}$, $\frac{19}{50}$.
Which fraction is the greatest? The smallest?

5. Record all fractions with the denominator 11, that could be found between $\frac{3}{11}$ and $\frac{8}{11}$.

Answers: 1 6 and 12

$$2 \quad \frac{3}{8}, \frac{12}{32} = \frac{3}{8}, \frac{20}{36} = \frac{5}{9}, \frac{10}{18} = \frac{5}{9}$$

$$3 \quad \frac{3}{2} = 1\frac{1}{2}, \frac{3}{5}, \frac{2}{9}, \frac{7}{4} = 1\frac{3}{4}, \frac{6}{7}$$

$$4 \quad \frac{50}{100}, \frac{75}{100}, \frac{40}{100}, \frac{30}{100}, \frac{35}{100}, \frac{38}{100}$$

$$5 \quad \frac{4}{11}, \frac{5}{11}, \frac{6}{11}, \frac{7}{11}$$

GRADE 6 LESSON 4
MULTIPLYING AND DIVIDING BY A TWO-DIGIT NUMBER.

1. Evaluate

a) $(243,916 + 75,446) \div 3$;

b) $729 \cdot 11 + 1,919 \div 19$;

c) $(357 - 348 \div 6) \cdot 500$.

2. Is this inequality correct $398 + 87 \cdot 24 < 3,100$?

3. 45 buttons are needed to make 45 suits. How many suits can be made with 1890 buttons?

4. There are 250 paper clips in a box. How many paper clips are in a package that contains n boxes? Evaluate if $n = 20$, $n = 500$.

5. Write 3 four digit numbers that could be evenly divided by

a) 5, b) 9, c) 10.

Which ones of those numbers could be evenly divided by 2?

6. Which natural numbers, whose factor is 3, satisfy the condition:

$$202 < a < 232 ?$$

7. All numbers in a given set have a certain property. Find the number that does not belong. Explain your choice.

a) 20, 50, 67, 100, 120, 1,050;

b) 32, 58, 124, 173, 1 050, 1,246;

c) 51, 72, 111, 125, 696, 1,245.

Answers: 1 a) 106,454 b) 8,120 c) 149,500

2 It is correct

3 1,890 suits

4 5000, 125,000

5 a) 4,125 5,000 8,445 b) 9,000 9,027 8,100 c) 4,000 3,000 1,000

6 204, 207, 210, 213, 216, 219, 222, 225, 228, 231

7 a) 67 b) 173 c) 125

GRADE 6 LESSON 5
PERCENT.

1. Draw two stripes 12 cm and 15 cm long. Colour in 25 % of one stripe red. How many percent of the given stripe remains white? Colour in 10 % of the other stripe.
2. Mary had \$5000 and spent 1 % of this amount to buy a present for her friend. How much money has Mary spent on the gift? How much money is remaining?
3. Determine 5 % of 20.
4. Find 25 % from the number $8019 \div 11 - (1,725 - 1,696)$.
5. Sarah has deposited \$120000 into her bank at 3 % annual (yearly) interest. How much money will there be in the account at the end of 1 year?
6. Out of 48 employees that work at a company, 36 are female employees and the rest are male employees. What percentage of employees are female? What percentage are male?
7. Out of 50 corn seeds 46 have sprouted. What percentage has sprouted?

Answers: 1 Answers may vary

2 Spent \$50, has \$4,950 remaining

3 1

4 175

5 \$123,600

6 75% are female and 25% are male

7 92%

GRADE 6 LESSON 6
DECIMALS.

1. Rewrite as decimals:

a) 0 wholes 126 thousandths;

b) 17 wholes 15 thousandths;

c) 123 wholes 7 thousandths.

Round the decimals above to tenths and hundredths.

2. Evaluate:

a) $2,779.6 + 8,024.405$;

b) $5 - 0.946$;

c) $4.1 - 2.345$.

3. Multiply:

a) $0.4 \cdot 9$;

b) $0.25 \cdot 4$;

c) $2.53 \cdot 2$;

d) $10.4 \cdot 0.05$;

e) $0.8 \cdot 0.8$;

f) $10.08 \cdot 1.3$;

g) $0.75 \cdot 2.3$.

4. Evaluate:

a) $8.3 \cdot 0.1$;

b) $1,800 \cdot 0.01$;

c) $5 \cdot 0.01$;

d) $3.7 \cdot 10$;

e) $132.17 \cdot 100$;

f) $0.5 \times 1,000$.

5. Find the value of the expression:

a) $(7 - 6.36) \cdot 2.5$;

b) $8 - 4.46 \cdot 1.5$;

c) $308.6 \cdot 0.5 + 8.15 \cdot 2.1$.

6. A mom has purchased 1.5 kg of candy and 1.8 kg of cookies. What is the total cost of the purchase, if the candy costs \$4.1 per 1 kg and the cookies cost \$2.3 per 1 kg? How much more expensive are the candy than the cookies?

Answers: 1 a) 0.126 b) 17.015 c) 123.007

2 a) 10,804.005 b) 4.054 c) 1.755

3 a) 3.6 b) 1 c) 5.06 d) 0.52 e) 0.64 f) 13.104 g) 1.725

4 a) 0.83 b) 18 c) 0.05 d) 37 e) 13,217 f) 5000

5 a) 1.6 b) 1.131 c) 171.415

6 Total cost \$10.29, candy are \$1.8 per kg more expensive

GRADE 6 LESSON 7
DIVIDING DECIMALS. UNITS OF MEASURE.

1. Evaluate:

a) $5.4 \div 9$;

b) $0.54 \div 0.3$;

c) $2.02 \div 20$;

d) $0.108 \div 0.002$.

2. Divide using a long division method:

a) $1 \div 0.8$;

b) $1.016 \div 0.4$;

c) $10 \div 2.5$;

d) $16.9 \div 0.13$.

3. Determine the value of the expression: $30.5 \div a$, if $a = 0.1$; 10; 100 .

4. Determine the value of the expression: $(13.42 - 5.62) \div 4 - 0.897$.

5. Express in meters: 6 km 300 m; 15 dm; 25 cm.

6. Express in centimeters: 1 m 1 dm; 2 dm 5 cm; 128 mm; 23 mm.

7. Express in kilometers: 28,050 m; 12,000 m; 250 m.

8. Express in kilograms: 15 tons 300 kg; 3,000 g; 220 g.

9. Express in tons: 6,000 kg; 5,400 kg; 200 kg.

Answers: 1 a) 0.6 b) 1.8 c) 0.101 d) 54

2 a) 1.25 b) 2.54 c) 4 d) 130

3 305, 3.05 0.305

4 1.053

5 6,300 m, 1.5 m, 0.25 m

6 110 cm, 25 cm, 12.8 cm, 2.3 cm

7 28.05 km, 12 km, 0.25 km

8 15,300 kg, 3 kg, 0.22 kg

9 6 tons, 5.4 tons, 0.2 tons