

0) Write the definition of "open interval".

- 1a) Graph the interval for: x is between -8 and -13 , not including the endpoints.
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.
- d) Is this an open or closed interval?

- 2a) Graph the interval for: x is between 0 and 12 , not including the endpoints.
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.
- d) Is this an open or closed interval?

- 3a) Graph the interval for: x is between 5 and -6 , including the endpoints.
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.
- d) Is this an open or closed interval?

- 4a) Graph the interval for: x is between 10 and -14 , including the endpoints.
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.
- d) Is this an open or closed interval?

- 5a) Graph the interval for: x is greater than 6 .
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.

- 6a) Graph the interval for: x is less than 9 .
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.

- 7a) Graph the interval for: x is greater than or equal to -8 .
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.

- 8a) Graph the interval for: x is less than or equal to -1 .
- b) Write this interval using inequality notation.
- c) Write this interval using interval notation.

9) Write two additional ways to indicate "all real numbers". One uses a special symbol. One uses interval notation.

1) Round to the nearest tenth:

- a) 0.632
- b) 12.89
- c) 8.991
- d) 3.4551

2) Round to the nearest hundredth:

- a) 8.9902
- b) 13.296
- c) 2.00811
- d) 112.9353

3) Round to the nearest thousandth:

- a) 92.03796
- b) 1.02981
- c) 20.3955
- d) 3.03812

4) Which number is greater? Insert the correct inequality symbol.

- | | |
|--------------|-----------|
| a) 8.39283 | 8.39311 |
| b) 1.200397 | 1.200379 |
| c) 12.01183 | 12.02001 |
| d) -8.1943 | -8.914 |
| e) -92.88449 | -92.8849 |
| f) -0.0004 | -0.000081 |

1) Convert to decimal

- a) 93%
- b) 8.22%
- c) 0.13%
- d) 70%
- e) 320.2%
- f) 0.0299%

2) Convert to percent

- a) 0.05
- b) 0.611
- c) 0.2
- d) 0.00033
- e) 2.4
- f) 0.82

Calculator is fine for these. Write answers to 3 significant digits.

3a) What is 40% of 298.

3b) What is 0.2% of 39.

3c) What is 108% of 70.22

4a) What percent of 48 is 12.94?

4b) What percent of 8000 is 79?

4c) What percent of 601.3 is 580.9?

5a) The number 80.3 is 30% of what?

5b) The number 100 is 29.7% of what?

5c) The number 9.22 is 143% of what?

1) Convert to decimal

a) 8.24×10^9

b) 2.001×10^4

c) 6×10^{11}

d) 3.221×10^1

e) 3.9×10^{-2}

f) 3.112×10^{-5}

g) 9.321×10^{-12}

h) 2×10^{-8}

2) Convert to scientific notation

a) 832,000,000

b) 93.8

c) 8,000,000,000

d) 3,391,000

e) 0.000000004 (eight zeros between decimal point and 4)

f) 0.00002891 (four zeros between decimal point and 2)

g) 0.887

h) 0.0000000000221 (ten zeros between decimal point and 2)

Arithmetic of integers

Perform the indicated operation. Write as a fraction as needed. No calculator

a) $12 + 9$

b) $1 + (-8)$

c) $-6 + (-11)$

d) $12 + (-1)$

e) $-3 + 10$

f) $-80 + 12$

g) $12 - 9$

h) $10 - 22$

i) $-2 - 4$

j) $-11 - (-9)$

k) $-3 - (-13)$

l) $82 - (-15)$

m) $3 * 10$

n) $5 * (-9)$

o) $-12 * (-5)$

p) $20 \div 10$

q) $8 \div 17$

r) $-8 \div (2)$

s) $-11 \div 23$

t) $10 \div (-19)$

u) $100 \div (-5)$

v) $-30 \div (-6)$

w) $-1 \div (-9)$

Find each answer. No calculator

a) $9 + 0$

b) $0 + 15$

c) $0 + (-11)$

d) $-39 + 0$

e) $12 - 0$

f) $-81 - 0$

g) $0 - 14$

h) $0 - (-200)$

i) $0 * 20$

j) $16 * 0$

k) $0 * (-112)$

l) $-92 * 0$

m) $0 \div 19$

n) $0 \div (-24)$

o) $3 \div 0$

p) $-88 \div 0$

q) $0 \div 0$

1) Convert from mixed number to improper fraction

a) $12\frac{1}{5}$

b) $2\frac{9}{13}$

c) $5\frac{3}{7}$

d) $29\frac{3}{4}$

2) Convert from improper fraction to mixed number

a) $\frac{113}{51}$

b) $\frac{80}{7}$

c) $\frac{47}{11}$

d) $\frac{97}{12}$

3) Reduce to lowest terms

a) $\frac{295}{115}$

b) $\frac{84}{8}$

c) $\frac{10}{82}$

d) $\frac{45}{225}$

Perform the indicated operation. Write each answer in lowest terms. No calculator

a) $\frac{2}{5} + \frac{3}{8}$

b) $\frac{1}{15} + \frac{9}{25}$

c) $\frac{3}{7} + \frac{4}{49}$

d) $\frac{10}{13} - \frac{3}{11}$

e) $\frac{9}{16} - \frac{5}{24}$

f) $\frac{91}{100} - \frac{3}{20}$

g) $\frac{2}{5} * \frac{25}{8}$

h) $\frac{12}{13} * \frac{39}{60}$

i) $\frac{1}{100} * \frac{20}{27}$

j) $\frac{12}{5} \div \frac{3}{11}$

k) $\frac{15}{13} \div \frac{36}{5}$

l) $\frac{1}{20} \div \frac{8}{5}$

Perform the indicated operation. Write answers as improper fractions (if applicable).

a) $9 + \frac{3}{7}$

b) $3 + \frac{15}{8}$

c) $8 - \frac{2}{5}$

d) $10 - \frac{19}{3}$

e) $\frac{113}{5} - 10$

f) $12 * \frac{3}{8}$

g) $10 * \frac{13}{5}$

h) $9 \div \frac{3}{10}$

i) $11 \div \frac{31}{5}$

j) $\frac{12}{13} \div 9$

k) $\frac{35}{2} \div 5$

Which number is greater? Insert the correct inequality symbol. No calculator Page 10

a) $\frac{19}{5}$ $\frac{27}{7}$

b) $\frac{3}{11}$ $\frac{14}{53}$

c) $\frac{100}{19}$ $\frac{19}{4}$

d) $-\frac{28}{17}$ $-\frac{81}{56}$

e) $-\frac{1}{8}$ $-\frac{5}{41}$

f) $-\frac{22}{29}$ $-\frac{3}{5}$