

Summer Work: 7th Grade - Pre-Algebra/Pre-Algebra Enriched

1. Please do your work on a separate sheet of paper. **SHOW YOUR WORK.**
2. The answers are at the end of the document, so check as you go.
3. Bring completed work with you to class at the start of the year.
4. Do your best. Know that you will have an opportunity to ask questions if there are problems that you do not know how to do or do not remember fully.
5. There will be a diagnostic assessment in the first few weeks of class so that your teacher can assess your understanding.

Below are some IXL skills that are **RECOMMENDED** *but not required* for students entering Pre-Algebra or Pre-Algebra Enriched next year. A good rule of thumb is that a score of 80 reflects proficiency and a score of 90, mastery.

YFF [Greatest common factor](#)

5WC [Least common multiple](#)

CQV [GCF and LCM: word problems](#)

BFA [Understanding exponents](#)

46F [Prime factorization](#)

VXU [Coordinate plane review](#)

JX8 [Compare and order integers](#)

QFU [Add integers](#)

HEU [Subtract integers](#)

DQT [Multiply integers](#)

CTV [Divide integers](#)

7YN [Evaluate numerical expressions involving integers](#)

R5J [Round decimals](#)

TGN [Add, subtract, multiply, and divide decimals: word problems](#)

KR7 [Add, subtract, multiply, and divide fractions and mixed numbers: word problems](#)

Find the least common multiple (LCM):

1a. 12 and 2

1b. 12 and 9

1c. 12 and 16

Find the greatest common factor (GCF):

2a. 30 and 18

2b. 63 and 42

2c. 16, 27 and 20

What is the prime factorization of:

3a. 30

3b. 105

3c. 294

Find the sum or difference:

4a. $1\frac{1}{2} + 4\frac{5}{8}$

4b. $7\frac{2}{9} - 3\frac{5}{6}$

4c. $4\frac{3}{5} + 7\frac{1}{2}$

4d. $17\frac{4}{9} - 12\frac{2}{3}$

Find the product:

5a. $9 \times 1\frac{1}{12}$

5b. $\frac{3}{11} \times 3\frac{1}{4}$

5c. $2\frac{1}{3} \times 1\frac{1}{2}$

Find the quotient:

6a. $\frac{8}{5} \div \frac{7}{8}$

6b. $2\frac{5}{8} \div 3$

6c. $4\frac{1}{3} \div 5\frac{1}{2}$

Find an equivalent fraction. What number could replace n?

7a. $\frac{1}{3} = \frac{2}{n}$

7b. $\frac{2}{10} = \frac{n}{100}$

7c. $\frac{n}{8} = \frac{15}{40}$

Order from least to greatest:

8a. $\frac{9}{10}$ $\frac{4}{5}$ $\frac{1}{2}$

8b. $\frac{1}{2}$ $\frac{5}{4}$ $\frac{7}{8}$

8c. $\frac{2}{3}$ $\frac{3}{8}$ $\frac{3}{4}$

Round to the nearest hundredth:

9a. 0.5235

9b. 398.4758

9c. 82.7971

10a. Graph each point on the coordinate grid:

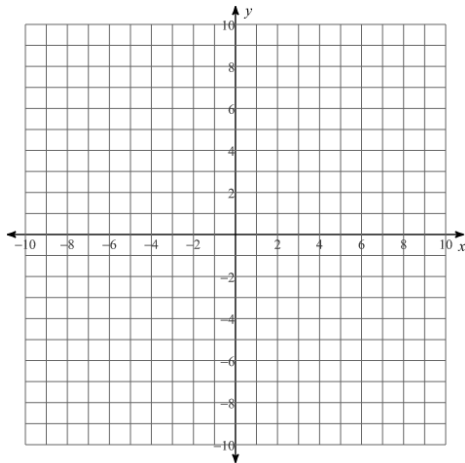
P (-8, -7)

Q (-2, 2)

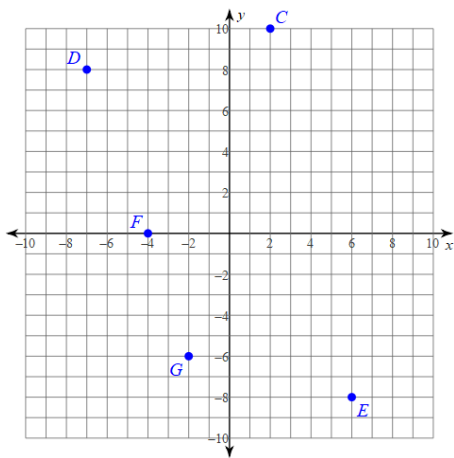
R (6, 10)

S (8, -7)

T (0, 8)



10b. Name the coordinates of each point:



C (,)

D (,)

E (,)

F (,)

G (,)

10c. In which quadrant does each point lie?

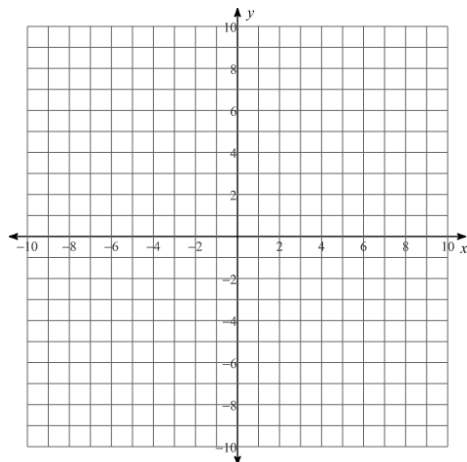
P (-4, -9) → Quadrant _____

Q (1, -5) → Quadrant _____

R (9, 3) → Quadrant _____

S (6, 10) → Quadrant _____

T (-1, 1) → Quadrant _____



Find the sum:

11a. $-5 + 2$

11b. $18 + -12$

11c. $-6 + -7$

11d. $-10 + 10$

Find the difference:

12a. $4 - 18$

12b. $-8 - 13$

12c. $9 - (-2)$

12d. $-6 - (-12)$

Find the product:

13a. $(9)(-7)$

13b. $(-8)(-6)$

13c. $(-12)(4)$

Find the quotient:

14a. $-36 \div 9$

14b. $-121 \div -11$

14c. $56 \div -7$

Solve using order of operations:

15a. $8 - 13 + -7 - (-6) - 9$

15b. $3 - 11 \times -3 - 36 \div 12$

15c. $((1 + 3)^2 \times -2) \div 8 + -6$

Find the sum:

16a. $1.12 + 29.9$

16b. $0.678 + 3.4$

16c. $182.57 + 34$

Find the difference:

17a. $98.4 - 4.2$

17b. $127.3 - 2.45$

17c. $58 - 3.298$

Find the product:

18a. 7×2.3

18b. 41.2×7.8

18c. 35.68×9.32

Find the quotient (round your answer to the nearest hundredth):

19a. $5.82 \div 3$

19b. $98.56 \div 1.2$

19c. $9 \div 2.1$

Solve for x:

20a. $x + 12 = 9$

20b. $x - 23 = 14$

20c. $7 + x = -18$

20d. $-38 + x = -7$

20e. $-7x = 56$

20f. $-12x = -60$

20g. $\frac{x}{5} = -11$

20h. $\frac{x}{-9} = -3$

ANSWERS - Remember that you should be showing your work when possible.

- 1a. 12
b. 36
c. 48

- 2a. 6
b. 21
c. 1

- 3a. $2 \times 3 \times 5$
b. $3 \times 5 \times 7$
c. $2 \times 3 \times 7 \times 7$

- 4a. $6\frac{1}{8}$
b. $3\frac{7}{18}$
c. $12\frac{1}{10}$
d. $4\frac{7}{9}$

- 5a. $\frac{117}{12} = 9\frac{3}{4}$
b. $\frac{39}{44}$
c. $\frac{7}{2} = 3\frac{1}{2}$

- 6a. $\frac{64}{35} = 1\frac{29}{35}$
b. $\frac{7}{8}$
c. $\frac{26}{33}$

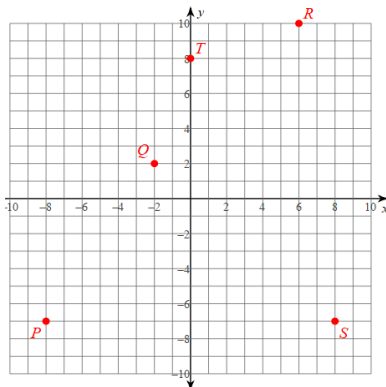
- 7a. $n = 6$
b. $n = 20$
c. $n = 3$

- 8a. $\frac{1}{2}, \frac{4}{5}, \frac{9}{10}$
b. $\frac{1}{2}, \frac{7}{8}, \frac{5}{4}$
c. $\frac{3}{8}, \frac{2}{3}, \frac{3}{4}$

- 9a. 0.52
b. 398.48
c. 82.80

10a.

$P(-8, -7)$ $Q(-2, 2)$ $R(6, 10)$
 $S(8, -7)$ $T(0, 8)$



- b. C (2, 10); D (-7, 8);
E (6, -8); F (-4, 0);
G (-2, -6)

- c. P - 3rd; Q - 4th; R - 1st;
S - 1st; T - 2nd

- 11a. -3
b. 6
c. -13
d. 0

- 12a. -14
b. -21
c. 11
d. 6

- 13a. -63
b. 48
c. -48

- 14a. -4
b. 11
c. -8

- 15a. -15
b. 33
c. -10

- 16a. 31.02
b. 4.078
c. 216.57

- 17a. 94.2
b. 124.85
c. 54.702

- 18a. 16.1
b. 321.36
c. 332.5376

- 19a. 1.94
b. 82.13
c. 4.29

- 20a. $x = -3$
b. $x = 37$
c. $x = -25$
d. $x = 31$
e. $x = -8$
f. $x = 5$
g. $x = -55$
h. $x = 27$