

Summer Work: 8th Grade Algebra 8 & 8Enriched

READ ALL DIRECTIONS BEFORE BEGINNING!

The problems on the following pages are **REQUIRED**.

1. Please do your work on a separate sheet of paper. **SHOW YOUR WORK**.
2. You may **ONLY** use a calculator for #10-17. **NO CALCULATORS** for #1-9.
3. The answers are at the end of the document, so check as you go.
4. Bring completed work with you to class at the start of the year.
5. 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.
6. 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 Algebra 8 or Algebra 8 Enriched next year. A good rule of thumb is that a score of 80 reflects proficiency and a score of 90, mastery.

6UW [Add and subtract integers](#)

5E3 [Evaluate numerical expressions involving rational numbers](#)

5XV [Solve proportions: word problems](#)

BNY [Solve proportions](#)

JNT [Percents of numbers: word problems](#)

UAN [Solve percent equations](#)

KZZ [Percent of a number: tax, discount, and more](#)

T6E [Coordinate plane review](#)

2HR [Follow directions on a coordinate plane](#)

6MY [Area and perimeter: word problems](#)

V77 [Evaluate one-variable expressions](#)

QP7 [Add and subtract like terms](#)

YP8 [Identify equivalent linear expressions II](#)

HDX [Calculate mean, median, mode, and range](#)

#1-9. NO CALCULATOR. SHOW YOUR WORK. Do this on a separate sheet of paper.

1a. $0.307 + 0.19$

b. $.422 + 7.49$

c. $82.06 + 103.955$

2a. $72.83 - 16.99$

b. $15 - 0.026$

c. $13.2 - 0.876$

3a. 3.45×0.2

b. $1500 \times .2$

c. 4.5×1.03

4a. $\frac{5}{3} + \left(\frac{-7}{6}\right)$

4b. $\frac{5}{6} - \left(\frac{-5}{9}\right)$

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

5a. $\frac{-7}{3} \times \frac{6}{5}$

5b. $\frac{-2}{3} \times \frac{-1}{6}$

5c. $6\frac{3}{4} \times \left(-1\frac{1}{3}\right)$

6a. $\frac{2}{5} \div \frac{-2}{3}$

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

6c. $\frac{\frac{-3}{5}}{\frac{2}{7}}$

7a. $14 - (5 + 1)^2$

7b. $-2^3 - 3^2$

7c. $-3 + 5(-6) - 7(-1)$

8a. Complete the inequality with =, < or >: 2^5 5^2

8b. $\left(\frac{3}{7}\right)^2$

8c. $(0.5)^2$

9a. Evaluate $7c + 8d - 11$ when $c = 3$ and $d = -2$.

9b. Evaluate $4a + b^2$ when $a = -5$ and $b = 8$.

9c. Evaluate $10x - xy$ when $x = -6$ and $y = -4$.

#10-17. You MAY use a CALCULATOR. Still SHOW YOUR WORK, however.

10a. What is 4% of 10?

10b. 12 is 60% of what number?

10c. 20 is what percent of 25?

11a. While waiting for a video game to download, you notice that 30% of the 32,000 kilobytes have been downloaded so far. How many kilobytes have been downloaded?

11b. Of the 50 U.S. states, 4 have names that start with the letter W. What percent of the U.S. states have names that start with the letter W?

11c. Ms. O'Neal asks her class what kind of party they want to have to celebrate their excellent behavior. Out of all the students in the class, 5 want an ice cream party, 7 want a movie party and 10 want a costume party. The rest are undecided. If 20% want an ice cream party, how many students are in the class?

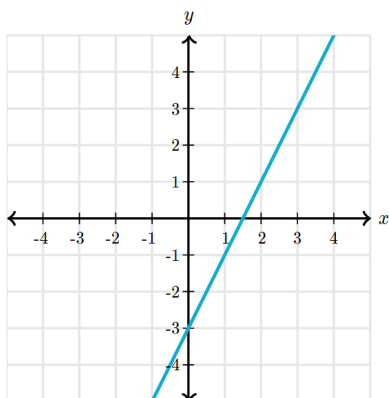
12a. In the coordinate plane, if a point is located 3 units to the right of the origin and 5 units down, in which quadrant does it lie?

12b. In which quadrant does the point (-4,-5) lie?

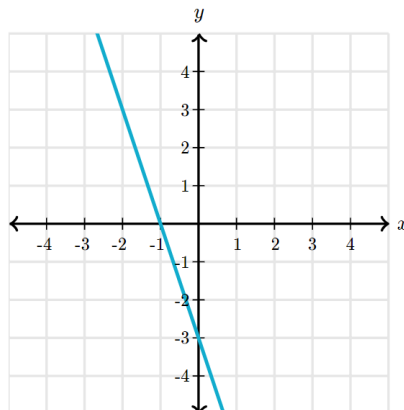
12c. The ordered pair (a, b) gives the location of a point in the coordinate plane. If $a = 0$, but b is not 0, on which axis must the point located?

13. Find the slope of each line:

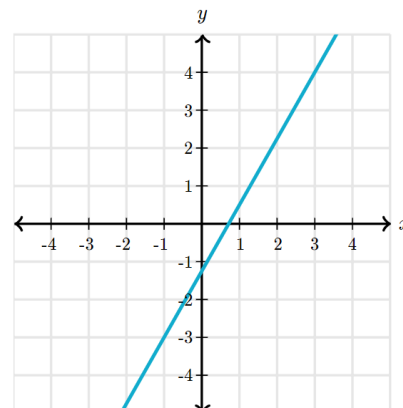
a.



b.



c.



14. Solve for each variable:

a. $-11x + 7 = 40$

b. $-9 = -5 + 8y$

c. $\frac{n}{5} - 8 = 2$

15a. A student walked 25 km in 4 hrs. What is her average speed in kilometers per hour?

15b. A dozen apples cost \$4.80. What is the unit price?

15c. Baugher's sells 12 oranges for \$5.00. How much would 18 oranges cost at the same rate?

16a. Find the area of a triangle with a base of 24 meters and a height of 3.5 meters. ($A = \frac{1}{2}bh$)

b. What is the perimeter of a square with an area of 81 square feet?

c. The area of a rectangle is 6 inches. If the base measures $\frac{1}{4}$ inch, what is the height of the rectangle?

17a. Mercury melts at -38.87°C and boils at 356.9°C . What is the difference between these temperatures?

17b. The altitude of the Dead Sea is 1296 feet below sea level. How much greater is the altitude of Death Valley, California, at 282 feet below sea level?

17c. An astronaut enters a space capsule 1 hour 40 minutes before launch time. How long has she been in the capsule 2 hours 30 minutes after the launch?

18. Translate each phrase into a mathematical expression.

a. Ten more than twice a number

b. Eight less than two-thirds of a number

c. Twice the sum of a number and four

ANSWERS - Remember that you should be showing your work.

<p>1a. .497 b. 7.912 c. 186.015</p> <p>2a. 55.84 b. 14.974 c. 12.324</p> <p>3a. 0.69 b. 300 c. 4.635</p> <p>4a. $\frac{1}{2}$ b. $\frac{25}{18} = 1\frac{7}{18}$ c. $\frac{-3}{4}$</p> <p>5a. $\frac{-14}{5} = -2\frac{4}{5}$ b. $\frac{1}{9}$ c. -9</p> <p>6a. $\frac{-3}{5}$ b. $\frac{-9}{14}$ c. $\frac{-21}{10} = -2\frac{1}{10}$</p>	<p>7a. -22 b. -17 c. -26</p> <p>8a. > b. $\frac{9}{49}$ c. .25</p> <p>9a. -6 b. 44 c. -84</p> <p>10a. .4 b. 20 c. 80%</p> <p>11a. 9600 kb b. 8% c. 25 students</p> <p>12a. Quadrant IV b. Quadrant III c. y-axis</p>	<p>13a. $m = 2$ b. $m = -3$ c. $m = \frac{7}{4}$</p> <p>14a. $x = -3$ b. $y = \frac{-1}{2}$ c. $n = 50$</p> <p>15a. 6.25 km/hr b. \$.40/apple c. \$7.50</p> <p>16a. 42 m² b. 36 ft c. 24 in</p> <p>17a. 395.77° b. 1014 ft c. 4hr 10min</p> <p>18a. $10 + 2n$ (or $2n + 10$) b. $\frac{2}{3}n - 8$ c. $2(n + 4)$</p>
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