

Summer Math Packet 2020 Entering 8th Grade

DIRECTIONS: SHOW ALL WORK ON LOOSE LEAF. ALL WORK SHOWN MUST SUPPORT YOUR ANSWER.

1. Derek applies grass seed to $\frac{2}{5}$ acre in $\frac{3}{4}$ hour. How many acres can Derek cover per hour?
2. Write an equation that shows the relationship between cost in dollars (y) and weight (x).

x	2	3	4	6
y	13	19.5	26	39

3. The low temperature in degrees Fahrenheit for 5 days was -5 , -7 , -2 , 2 , and -3 . What was the average low temperature for those days?
4. A ribbon is $12\frac{3}{8}$ feet long. Into how many $\frac{3}{4}$ foot pieces can it be cut?
5. Express in simplest form: $\frac{1}{2}(2a + b) - (4a + b)$
6. The width of a rectangle is $3x - 3$. Its perimeter is $10x + 6$. Find the length of the rectangle.
7. Ben rented a car. It cost \$30.00 plus \$0.25 per mile. If Ben paid \$85.00 for the car rental, how many miles did he drive the car?
8. A circle has a diameter of 18 meters. Find its area to the nearest tenth.
9. A map scale is 1cm: 50km. Two cities are 3.8cm apart on the map. Find the actual distance between the two cities.
10. What is the solution of the inequality below? $-0.4x - 1.2 > 0.8$

11. Solve algebraically: $-2d + 3 + 7d = -12$
12. A circle is 75.36 yards in circumference. What is its diameter? Round to the nearest yard.
13. The circumference of a circle is 28π meters. What is its area in terms of pi?
14. A shopper bought shoes marked \$40. The sales tax rate is 5%. How much is the total including sales tax?
15. Angles C and E are supplementary. The $m\angle C = 112^\circ$ and $m\angle E = (3x + 50)^\circ$. Solve for x.

Extensions

16. What is the solution to the inequality? $\frac{3}{2}m - 4 > \frac{4}{5} + \frac{7}{10}m$
17. Solve for p algebraically: $p - 17 = 2p + 3$
18. Write the product as one power. $a^8 \cdot a^5$
- 19.
- a) Write 2.6×10^4 in standard notation.
- b) Write 0.000923 cm in scientific notation.
20. **Solve the equations below in order. Once you know the value of the variable, substitute the value in the following equation.**
- 1) Solve for a: $3a = -4.2$ 2) Solve for b: $a + b = -7.8$
- 3) Solve for c: $1\frac{2}{3}c = a - b$ 4) Solve for d: $\frac{a+b}{c} = -2d$