

Name \_\_\_\_\_

### Incoming 7<sup>th</sup> Grade Summer Math Packet Directions:

Happy Summer! The following summer assignment is to be used as a study tool to prepare you for the skills necessary for success in 7<sup>th</sup> grade Pinnacle or Advanced Mathematics. **This is due, will be checked for completion and effort, and counted as a quiz grade on the first day of school.** The following skills will be assessed as your first test grade. The first test will be given within the first few weeks of school. **Do not use a calculator**, as you will not be permitted to use one on the test. If you are struggling on certain skills, the chapters and chapter sections from your sixth grade Big Ideas Math textbook (Advanced 1) are provided next to the topic in the table of contents. You still have access to this resource on the Big Ideas Math website, [www.bigideasmath.com](http://www.bigideasmath.com). You can also use resources such as [www.ixl.com/math](http://www.ixl.com/math), [www.khanacademy.org/math/pre-algebra](http://www.khanacademy.org/math/pre-algebra), [www.coolmath.com/prealgebra](http://www.coolmath.com/prealgebra), and more can be found through an online search. **Show all work including your final answer.**

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## Topic: Adding and Subtracting Integers

**Add.**

1.  $8 + 2$

2.  $-5 + (-3)$

3.  $-9 + (-3)$

4.  $6 + (-6)$

**Add.**

5.  $7 + 5 + (-2)$

6.  $-13 + 7 + (-3)$

7.  $17 + (-5) + (-1)$

8.  $4 + 8 + (-8)$

**Subtract.**

9.  $3 - 8$

10.  $4 - (-5)$

11.  $-6 - 4$

12.  $-9 - (-6)$

**Evaluate the expression.**

13.  $8 - 12 - (-6)$

14.  $8 - (-8) - 3$

15.  $0 - (-4) - 8$

16.  $9 - (-4) + 1$

**Answers:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

## Topic: Multiplying and Dividing Integers

**Multiply.**

1.  $4 \cdot (-3)$

2.  $-6 \cdot 5$

3.  $-8(-2)$

4.  $2 \cdot (-3) \cdot 5$

5.  $-5(-4)(-1)$

**Evaluate the expression.**

6.  $(-3)^2$

7.  $-3 \cdot (-4)^2$

8.  $(-7)^2$

9.  $|-3| \cdot (-6)$

**Divide, if possible.**

10.  $8 \div (-4)$

11.  $\frac{-10}{5}$

12.  $0 \div (-7)$

13.  $-35 \div 7$

14.  $\frac{18}{-6}$

15.  $\frac{-56}{-8}$

**Answers:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

## Topic: Adding and Subtracting Rational Numbers

**Add. Write fractions in simplest form.**

1.  $\frac{5}{16} + \left(-\frac{7}{16}\right)$

2.  $\frac{3}{5} + \left(-\frac{4}{15}\right)$

3.  $-\frac{7}{2} + 3\frac{2}{3}$

4.  $5.6 + (-1.3)$

5.  $-8.2 + 5.4$

6.  $7.15 + (-12.76)$

**Subtract. Write fractions in simplest form.**

7.  $\frac{3}{7} - \frac{10}{7}$

8.  $\frac{7}{12} - \left(-\frac{13}{12}\right)$

9.  $-\frac{1}{3} - \left(-\frac{9}{4}\right)$

10.  $-3\frac{1}{2} - 1\frac{5}{6}$

11.  $-12.41 - (-9.95)$

12.  $2 - 8.25$

**Evaluate.**

13.  $\frac{7}{8} - \left(-2\frac{3}{4}\right) + \left(-4\frac{1}{2}\right)$

14.  $5.76 - (-2.31) - 10.64$

15.  $-\frac{5}{18} - \left|-\frac{1}{6}\right| + \left(-\frac{7}{9}\right)$

**Answers:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

## Topic: Multiplying and Dividing Rational Numbers

Divide. Write fractions in simplest form.

1.  $-\frac{2}{7} \div \frac{10}{7}$

2.  $-\frac{1}{2} \div \left(-\frac{3}{4}\right)$

3.  $-1\frac{1}{6} \div \frac{5}{3}$

4.  $-0.72 \div (-0.9)$

Multiply. Write fractions in simplest form.

5.  $\frac{2}{5} \times \left(-\frac{10}{7}\right)$

6.  $\frac{3}{2} \left(-2\frac{2}{9}\right)$

7.  $\left(-1\frac{3}{8}\right)^2$

8.  $-3.7 \times 2.1$

Answers:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

**Topic: Simplify Expressions**

**Simplify the expression.**

1.  $-15m + 9m$

2.  $8k - 2(4 - 3k)$

3.  $25 - 6x - 12 - 2x$

4.  $60m - 15(4 - 8m) + 20$

**Find the sum.**

5.  $(p - 3) + (p - 7)$

6.  $(3n - 1) + (4 - n)$

7.  $6(x - 3) + (2x - 9)$

**Find the difference.**

8.  $(k + 3) - (3k - 5)$

9.  $(-6d + 2) - (7 + 2d)$

10.  $(3x + 8) - 6(2.5x - 3)$

**Answers:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

Video support for this section:

<https://www.youtube.com/watch?v=2RYu6xGM518&authuser=0>

<https://www.youtube.com/watch?v=Sg2P0pi7g6k&authuser=0>

<https://www.youtube.com/watch?v=P9JZFvFVid4&authuser=0>

## Topic: Solving One-step Equations

Solve the equation using addition and subtraction.

1.  $x + 3 = 10$

2.  $b - 6 = -14$

3.  $5 = n + 9$

4.  $y - 2.1 = 7.5$

5.  $k - \frac{1}{3} = \frac{5}{6}$

6.  $10.5 + p = -8.32$

7.  $3\frac{3}{4} = r + \frac{1}{8}$

8.  $m + 1.06 = 5$

Solve the equation using multiplication or division.

9.  $4b = 24$

10.  $-7n = 35$

11.  $\frac{y}{-3} = 33$

12.  $-3t = -4.2$

13.  $1.5q = -8.4$

14.  $\frac{1}{5}d = -3$

15.  $14 = 3y$

16.  $\frac{g}{2.1} = -6.8$

Answers:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_



## Topic: Solving Two-step Equations

Solve the equation. Check your solution.

1.  $3k - 2 = 10$

2.  $5p + 2 = -10$

3.  $-4x + 3 = -11$

4.  $12 = 2d + 3.2$

5.  $-1 - 5h = 14$

6.  $1.25r - 7 = 2.5$

7.  $4y - 16.3 = 53.1$

8.  $\frac{1}{2}b + \frac{9}{4} = \frac{7}{4}$

9.  $7c - 2c = 45$

10.  $3(k - 5) = -16$

11.  $-2(m + 1) = 10$

12.  $-5(m + 4) = 27$

Answers:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_