

Dear Rising 6th Grade Families,

We are excited to have you joining us at Pope Prep. In an effort to help all families and students make the transition from elementary school math to middle school math, we have put together a packet of optional enrichment problems. The packet will not be collected or graded at any point. These problems have been compiled to provide extra practice and review of previously taught concepts. We are providing this so that all families have an idea of what skills and concepts will be used and built on during the 6th grade math year.

You will notice that much of this packet is focused on number-based skills - adding and subtracting, multiplying and dividing, working with negative and positive numbers, simplifying and rewriting fractions. Over the course of 6th grade, students will rely on these skills to use in applications and to build new ideas. Near the end of the year, after students have strengthened and practiced their number sense, they will begin using calculators to tackle more complex problems. All students will be required to purchase a TI-84, TI-84 Plus, or TI - 84 Plus CE calculator that will be used in math and science classes from 6th grade to 12th grade.

As a reminder, all incoming 6th grade students will be placed into 6th grade math. If we feel a student is misplaced, the teacher will reach out to families about a potential course change in the first few weeks of school.

If you have any questions or would like additional information about the math program, please contact Amanda Peper, the Mathematics Department chair, at amanda.peper@popeprep.org.

Sincerely,

Amanda Peper

amanda.peper@popeprep.org

Mathematics Department Chair

Name : _____

Score : _____

Multiplication

3-digit by 2-digit: 51

$$\begin{array}{r} 1) \quad 829 \\ \times \quad 40 \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 362 \\ \times \quad 15 \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 491 \\ \times \quad 29 \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 215 \\ \times \quad 36 \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 951 \\ \times \quad 84 \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 536 \\ \times \quad 60 \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 158 \\ \times \quad 72 \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 692 \\ \times \quad 57 \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 726 \\ \times \quad 93 \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 814 \\ \times \quad 49 \\ \hline \end{array}$$

$$\begin{array}{r} 11) \quad 372 \\ \times \quad 35 \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 487 \\ \times \quad 18 \\ \hline \end{array}$$

$$\begin{array}{r} 13) \quad 180 \\ \times \quad 31 \\ \hline \end{array}$$

$$\begin{array}{r} 14) \quad 698 \\ \times \quad 26 \\ \hline \end{array}$$

$$\begin{array}{r} 15) \quad 500 \\ \times \quad 54 \\ \hline \end{array}$$

$$\begin{array}{r} 16) \quad 285 \\ \times \quad 68 \\ \hline \end{array}$$

$$\begin{array}{r} 17) \quad 925 \\ \times \quad 37 \\ \hline \end{array}$$

$$\begin{array}{r} 18) \quad 382 \\ \times \quad 41 \\ \hline \end{array}$$

$$\begin{array}{r} 19) \quad 416 \\ \times \quad 80 \\ \hline \end{array}$$

$$\begin{array}{r} 20) \quad 721 \\ \times \quad 26 \\ \hline \end{array}$$

Name : _____

Score : _____

Teacher : _____

Date : _____

5 Minute Drill

$12 \div 12 =$	$96 \div 12 =$	$3 \div 3 =$	$36 \div 9 =$	$32 \div 4 =$
$44 \div 11 =$	$9 \div 3 =$	$30 \div 6 =$	$20 \div 10 =$	$20 \div 2 =$
$88 \div 8 =$	$70 \div 7 =$	$24 \div 8 =$	$16 \div 4 =$	$24 \div 2 =$
$18 \div 3 =$	$63 \div 9 =$	$55 \div 5 =$	$12 \div 3 =$	$100 \div 10 =$
$108 \div 9 =$	$40 \div 8 =$	$144 \div 12 =$	$36 \div 3 =$	$4 \div 4 =$
$22 \div 11 =$	$14 \div 2 =$	$45 \div 9 =$	$35 \div 7 =$	$2 \div 1 =$
$2 \div 2 =$	$80 \div 10 =$	$25 \div 5 =$	$132 \div 11 =$	$32 \div 8 =$
$30 \div 3 =$	$77 \div 7 =$	$15 \div 5 =$	$81 \div 9 =$	$49 \div 7 =$
$18 \div 9 =$	$12 \div 2 =$	$54 \div 6 =$	$66 \div 11 =$	$20 \div 4 =$
$63 \div 7 =$	$30 \div 5 =$	$42 \div 7 =$	$77 \div 11 =$	$60 \div 5 =$
$33 \div 3 =$	$72 \div 12 =$	$84 \div 12 =$	$108 \div 12 =$	$27 \div 9 =$
$48 \div 8 =$	$6 \div 3 =$	$24 \div 12 =$	$8 \div 4 =$	$56 \div 8 =$
$54 \div 9 =$	$48 \div 6 =$	$4 \div 2 =$	$8 \div 1 =$	$5 \div 1 =$
$10 \div 5 =$	$99 \div 9 =$	$22 \div 2 =$	$88 \div 11 =$	$60 \div 10 =$
$60 \div 12 =$	$18 \div 2 =$	$6 \div 6 =$	$21 \div 7 =$	$50 \div 5 =$
$7 \div 1 =$	$40 \div 10 =$	$72 \div 9 =$	$55 \div 11 =$	$9 \div 9 =$
$56 \div 7 =$	$48 \div 4 =$	$96 \div 8 =$	$60 \div 6 =$	$16 \div 2 =$
$12 \div 6 =$	$15 \div 3 =$	$3 \div 1 =$	$8 \div 2 =$	$84 \div 7 =$
$24 \div 6 =$	$11 \div 11 =$	$6 \div 1 =$	$10 \div 10 =$	$35 \div 5 =$
$44 \div 4 =$	$48 \div 12 =$	$40 \div 5 =$	$64 \div 8 =$	$42 \div 6 =$

Be sure to time yourself!!! Have FUN!!!

Round Up or Round Down

A) Round each decimal to the nearest whole number. Write whether you had to "round up" or "round down".

1) 31.3

2) 52.65

3) 9.98

4) 12.4

B) Round each decimal to the nearest tenth. Write whether you had to "round up" or "round down".

1) 7.23

2) 93.061

3) 26.124

4) 34.95

C) Round each decimal to the nearest hundredth. Write whether you had to "round up" or "round down".

1) 57.809

2) 86.1007

3) 70.5634

4) 2.725

D) Round each decimal to the nearest thousandth. Write whether you had to "round up" or "round down".

1) 84.2195

2) 6.30648

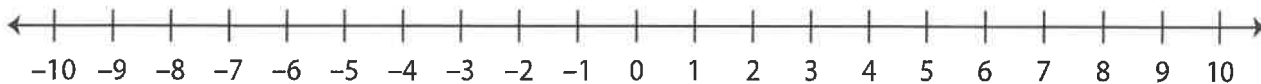
3) 18.50063

4) 45.6582

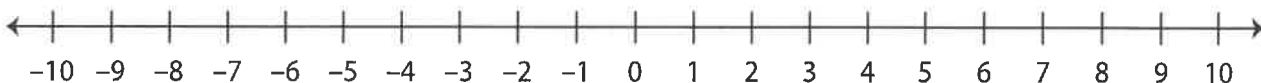
Integers on a Number Line

A) Locate the integers on the number line.

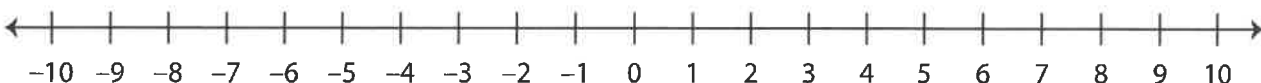
- 1) a) 6 b) -7 c) 8 d) -2



- 2) a) -10 b) 5 c) -4 d) 9



B) Observe the number line and answer the questions.



- 1) What integer is 6 units to the right of -3 is? _____
- 2) What integer is 7 units to the right of -2 is? _____
- 3) What integer is 4 units to the left of 1 is? _____
- 4) What integer is 3 units to the left of 10 is? _____
- 5) What integer is 5 units to the left of -5 is? _____
- 6) What integer is 8 units to the right of -9 is? _____
- 7) What integer is 2 units to the right of 7 is? _____



Subtracting large numbers in columns

Grade 5 Subtraction Worksheet

Find the difference.

$$\begin{array}{r} 1. \quad 34,914,817 \\ - \quad \quad 52,655 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 14,909,995 \\ - \quad \quad 28,182 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 25,889,719 \\ - \quad 1,507,874 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 9,409,895 \\ - \quad 1,669,413 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 751,611 \\ - \quad 52,349 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 89,757,949 \\ - \quad \quad 61,990 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 912,633 \\ - \quad 434,547 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 7,123,284 \\ - \quad 5,111,475 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 157,548 \\ - \quad 36,394 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 51,055,882 \\ - \quad \quad 941,428 \\ \hline \\ \hline \end{array}$$

Name : _____

Simplifying Mixed Numbers

Sheet 1

A) Reduce each mixed number to its lowest terms.

1) $10\frac{8}{32} =$

2) $2\frac{2}{4} =$

3) $7\frac{12}{24} =$

4) $12\frac{4}{28} =$

5) $3\frac{6}{8} =$

6) $8\frac{24}{36} =$

7) $9\frac{2}{10} =$

8) $5\frac{3}{45} =$

B) Circle the simplest form of each of the following mixed numbers.

1) $6\frac{7}{14}$

2) $3\frac{15}{27}$

$6\frac{1}{2}$

$6\frac{2}{3}$

$3\frac{4}{9}$

$3\frac{5}{9}$

3) $4\frac{3}{9}$

4) $11\frac{5}{35}$

$4\frac{2}{3}$

$4\frac{1}{3}$

$11\frac{1}{7}$

$11\frac{1}{5}$



Simplifying Fractions (including improper fractions)

Grade 5 Fractions Worksheet

Simplify the fractions.

1. $\frac{26}{12} =$ _____

2. $\frac{98}{21} =$ _____

3. $\frac{1115}{125} =$ _____

4. $\frac{28}{40} =$ _____

5. $\frac{10}{25} =$ _____

6. $\frac{525}{84} =$ _____

7. $\frac{925}{100} =$ _____

8. $\frac{405}{450} =$ _____

9. $\frac{165}{40} =$ _____

10. $\frac{81}{18} =$ _____

11. $\frac{6144}{800} =$ _____

12. $\frac{8}{32} =$ _____

13. $\frac{246}{36} =$ _____

14. $\frac{477}{225} =$ _____

15. $\frac{286}{32} =$ _____

16. $\frac{336}{70} =$ _____



Convert improper fractions to mixed numbers

Grade 5 Fractions Worksheet

Convert.

1. $\frac{113}{12} =$ _____

2. $\frac{19}{2} =$ _____

3. $\frac{36}{10} =$ _____

4. $\frac{75}{12} =$ _____

5. $\frac{50}{8} =$ _____

6. $\frac{52}{10} =$ _____

7. $\frac{13}{3} =$ _____

8. $\frac{39}{4} =$ _____

9. $\frac{68}{10} =$ _____

10. $\frac{27}{5} =$ _____

11. $\frac{53}{8} =$ _____

12. $\frac{72}{10} =$ _____

13. $\frac{11}{2} =$ _____

14. $\frac{45}{8} =$ _____

15. $\frac{42}{5} =$ _____

16. $\frac{15}{6} =$ _____

17. $\frac{7}{5} =$ _____

18. $\frac{86}{10} =$ _____

19. $\frac{13}{2} =$ _____

20. $\frac{23}{3} =$ _____

21. $\frac{34}{5} =$ _____



Convert mixed numbers to improper fractions

Grade 5 Fractions Worksheet

Convert.

1. $7\frac{3}{5} =$ _____

2. $6\frac{5}{8} =$ _____

3. $9\frac{2}{10} =$ _____

4. $2\frac{2}{4} =$ _____

5. $6\frac{1}{9} =$ _____

6. $5\frac{5}{7} =$ _____

7. $3\frac{1}{8} =$ _____

8. $3\frac{3}{12} =$ _____

9. $6\frac{1}{11} =$ _____

10. $4\frac{3}{4} =$ _____

11. $8\frac{9}{12} =$ _____

12. $9\frac{2}{8} =$ _____

13. $5\frac{8}{11} =$ _____

14. $3\frac{6}{9} =$ _____

15. $5\frac{10}{11} =$ _____

16. $6\frac{5}{6} =$ _____

17. $9\frac{1}{2} =$ _____

18. $7\frac{9}{10} =$ _____

19. $5\frac{1}{5} =$ _____

20. $8\frac{5}{10} =$ _____

21. $8\frac{2}{4} =$ _____

Name : _____

Adding Proper Fractions

ES1

1) $\frac{4}{6} + \frac{1}{6} =$

2) $\frac{2}{9} + \frac{3}{9} =$

3) $\frac{4}{8} + \frac{7}{8} =$

4) $\frac{10}{12} + \frac{6}{12} =$

5) $\frac{9}{10} + \frac{5}{10} =$

6) $\frac{1}{4} + \frac{2}{4} =$

7) $\frac{2}{5} + \frac{4}{5} =$

8) $\frac{6}{7} + \frac{3}{7} =$

9) $\frac{8}{11} + \frac{9}{11} =$

10) $\frac{1}{2} + \frac{1}{2} =$

11) $\frac{3}{7} + \frac{5}{7} =$

12) $\frac{9}{10} + \frac{8}{10} =$

13) $\frac{1}{3} + \frac{1}{3} =$

14) $\frac{5}{8} + \frac{4}{8} =$



Adding unlike fractions

Grade 5 Fractions Worksheet

Find the sum.

1. $\frac{1}{2} + \frac{2}{3} =$ _____

2. $\frac{8}{12} + \frac{8}{11} =$ _____

3. $\frac{2}{7} + \frac{6}{10} =$ _____

4. $\frac{1}{6} + \frac{6}{11} =$ _____

5. $\frac{5}{9} + \frac{1}{2} =$ _____

6. $\frac{9}{12} + \frac{2}{12} =$ _____

7. $\frac{2}{7} + \frac{1}{4} =$ _____

8. $\frac{1}{4} + \frac{6}{8} =$ _____

9. $\frac{4}{10} + \frac{4}{5} =$ _____

10. $\frac{1}{2} + \frac{8}{11} =$ _____

11. $\frac{1}{11} + \frac{2}{12} =$ _____

12. $\frac{2}{12} + \frac{2}{4} =$ _____

13. $\frac{3}{5} + \frac{3}{8} =$ _____

14. $\frac{6}{9} + \frac{1}{2} =$ _____



Adding mixed numbers and fractions (unlike denominators)

Grade 5 Fractions Worksheet

Find the sum.

1. $5\frac{2}{9} + \frac{6}{7} =$ _____

2. $7\frac{2}{6} + \frac{1}{12} =$ _____

3. $1\frac{1}{10} + \frac{7}{8} =$ _____

4. $5\frac{4}{7} + \frac{1}{9} =$ _____

5. $2\frac{1}{2} + \frac{1}{5} =$ _____

6. $1\frac{8}{11} + \frac{2}{8} =$ _____

7. $10\frac{6}{10} + \frac{2}{4} =$ _____

8. $2\frac{1}{2} + \frac{5}{6} =$ _____

9. $6\frac{6}{7} + \frac{3}{9} =$ _____

10. $10\frac{2}{6} + \frac{5}{12} =$ _____

11. $1\frac{4}{11} + \frac{2}{5} =$ _____

12. $7\frac{8}{11} + \frac{3}{5} =$ _____

13. $7\frac{3}{10} + \frac{5}{12} =$ _____

14. $7\frac{2}{6} + \frac{1}{4} =$ _____



Subtracting mixed numbers (unlike denominators)

Grade 5 Fractions Worksheet

Find the difference.

1. $16\frac{3}{9} - 10\frac{2}{5} =$ _____

2. $7\frac{5}{12} - 2\frac{1}{2} =$ _____

3. $8\frac{9}{10} - 3\frac{2}{3} =$ _____

4. $19\frac{2}{3} - 11\frac{5}{8} =$ _____

5. $13\frac{1}{8} - 12\frac{10}{12} =$ _____

6. $18\frac{1}{2} - 17\frac{2}{8} =$ _____

7. $14\frac{4}{10} - 13\frac{1}{3} =$ _____

8. $19\frac{7}{12} - 19\frac{1}{5} =$ _____

9. $20\frac{3}{4} - 18\frac{2}{3} =$ _____

10. $19\frac{7}{10} - 13\frac{4}{10} =$ _____

11. $17\frac{5}{6} - 1\frac{3}{5} =$ _____

12. $9\frac{1}{5} - 5\frac{4}{6} =$ _____

Evaluating Expressions | Parentheses

Evaluate each expression.

1) $(6 - 2) \times 13$

2) $75 \div (15 + 10)$

3) $(7 \times 8) + 24$

4) $55 - (72 \div 9)$

5) $33 + (32 \div 4)$

6) $(12 + 7) \times 3$

7) $65 - (5 \times 7)$

8) $(21 + 31) \div 26$

9) $(42 \div 6) - 1$

10) $44 + (11 \times 3)$

Fraction word problems

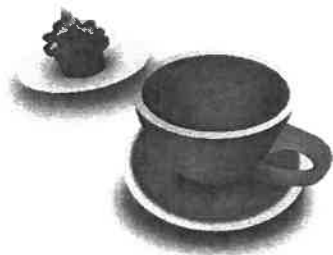
Grade 5 Word Problems Worksheet

Emily works at the coffee shop.

1. The coffee cups can hold $\frac{7}{9}$ of a pint of liquid. If Emily pours $\frac{2}{3}$ of a pint of coffee into a cup, how much milk can a customer add?

2. The capacity of the two milk pitchers on the counter is $\frac{9}{10}$ liter each. One pitcher has $\frac{3}{8}$ of a liter of milk in it and the other pitcher has $\frac{5}{12}$ of a liter milk in it. How much milk is there altogether?

3. Each large cookie is $\frac{5}{6}$ oz and each small cookie is $\frac{4}{9}$ oz. What is the total weight of 2 large cookies and 1 small cookie?



4. The coffee shop also sells small bags of coffee beans. The bags come in two sizes: $\frac{4}{5}$ kilogram and $\frac{7}{12}$ kilogram. How much more coffee does the bigger bag have?
5. There were two cheesecakes in the fridge. The first cheesecake was cut into 16 slices and there are 3 slices left. The other cheesecake was cut into 10 slices and 4 slices were sold. How much cake is left in the fridge?
6. There is a bag of sugar in the storage room. The bag contained $\frac{4}{5}$ kilograms of sugar. The chef filled up an empty can with $\frac{1}{10}$ kilogram of sugar and then used $\frac{3}{20}$ of a kilogram of sugar for a cake. How much sugar was left in the bag?

4. During a normal day, there are 782 passengers in average that are late for their plane each day. However, during the Christmas holidays, there are 1,835 passengers that are late for their planes each day which caused delays of 14 planes. How many more passengers are late for their planes in each day during the Christmas holidays?

5. The airport administration did a study and found that an additional 5 minutes of delay in the overall operation of the airport is caused for every 32 passengers that are late for their flights. What is the delay in the overall operation if there are 832 passengers late for their flights?

6. Write an equation using " x " and then solve the equation.
On the New Year Eve, there were 7,580 tons of cargo loaded in the morning. In the afternoon, there were x tons of cargos. The total weight of cargos loaded on the day weighed 12,997 tons.