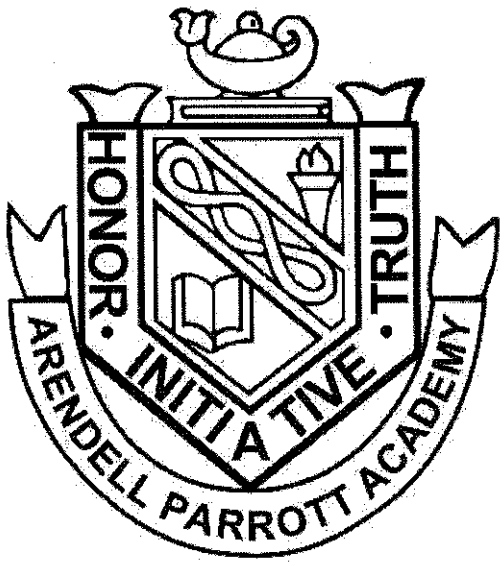

Summer Math Packet
For rising 7th graders

Printed Name: _____

6th grade math review for rising 7th graders at APA

Week one

1. 793 + 817=
2. 88,473 + 277=
3. 49 + 813 + 551=
4. 9,000 – 877=
5. 7,321 – 5987=
6. 15 x 27=
7. 380 x 125=
8. 55 x 44=
9. 475 ÷ 25=
10. 714 ÷ 42=

Order of Operations:

11. 14-(5+7) =
12. 12- 2 x 3=
13. 2 x 3 + 9 x 2=
14. 8×10^3 =
15. 30 – 4 x 2 + 8=
16. 3 + 5(17+23) =
17. 4 (36+14)-100 =
18. 7 x 6-(14+16) =
19. $3 \times 4 - 3^2$ =
20. $(80 \div 10) - 2^3$ =

Substitute and Solve (a=4, b=5, c=15, and d=1)

21. 6a + c=
22. 444-abc =
23. $a^3 + 3$ =
24. $4b^2$ =
25. (a + 2d)÷3 =

Week 2- Decimal addition and subtraction

1. 3.78 + 0.21 =
2. 42.07 + 38.78 =
3. 13.2 + 93 =
4. 80.1 + 0.32 =
5. 1.245 + 10 =
6. 0.889 + 0.3 =
7. 104.98 + 3.203 =
8. 1.245 + 2.54 =
9. 1000 + 0.7 =
10. 0.8 + 2.02 =
11. 42.07 – 38.78 =
12. 5.86 – 1.28 =
13. 42.3 – 8.76 =
14. 104.9 – 8.76 =
15. 20 – 4.3 =
16. 22.2 – 1.459 =
17. 0.889 – 0.23 =
18. 100 – 3.87 =
19. 17 – 0.394 =
20. 143.7 – 8.9073 =

Week 3

1. 1.32 x 4 =
2. 0.4 x 0.7 =
3. 1.5 x 0.27 =
4. 380 x 1.25 =
5. 0.44 x 55 =
6. 42 x 0.17 =
7. 1.9 x 6.23 =
8. 0.23 x 2 =
9. 4.527 x 10 =
10. 0.003 x 4.82 =
11. 9.81 ÷ 0.3 =
12. 5.76 ÷ 3.2 =
13. 38.57 ÷ 0.19 =

Multiplying by decimals:

Multiply, count the total decimal places in the factors and then put the decimal in the product.

14. $90.175 \div 2.5 =$
15. $2.475 \div 3 =$
16. $85 \div 0.5 =$
17. $812 \div 0.04 =$
18. $180 \div 3.6 =$
19. $14.4 \div 12 =$
20. $2{,}445.3 \div 3.3 =$

Week 4

1. $(-13) + (-72) =$
2. $73 + (-67) =$
3. $(-49) + (-82) =$
4. $16 + 39 =$
5. $(-87) + 52 =$
6. $97 + (-82) =$
7. $16 + 17 + (-30) =$
8. $(-18) + 12 + 18 =$
9. $(-17) + (-17) + (-17) + 51 =$
10. $139 + (-500) =$
11. $(-18) - (-30) =$
12. $53 - (-16) =$
13. $(-37) - (+43) =$
14. $30 - (+12) =$
15. $(-16) - (-300) =$
16. $340 - (+400) =$
17. $(-160) - (-160) =$
18. $97 - (+39) =$
19. $(-52) - (+14) =$
20. $(-16) - (+37) + (14) - (-4) =$

Adding integers:

Like signs: add and keep the sign.

Different signs: subtract and keep the sign of the larger digit.

Subtracting integers:

The 1st digit stays the same, change subtraction to addition, and write the opposite of the number following the subtraction sign. Then, use your addition rules.

Week 5

1. $5(-2) =$
2. $(-11)(-7) =$
3. $(-50)(0) =$
4. $5(-12) =$
5. $6(100) =$
6. $2(-2)(-5) =$

When multiplying and dividing, count your negative signs. Odd number of negatives=negative answer. Even number of negatives=positive answer.

7. 3(-13) =
8. $(14)^2$ =
9. (-4)(-1)(-60) =
10. (-3)(2)(-4) =
11. 14 ÷ (-2) =
12. -56 ÷ (-7) =
13. (-25) ÷ 5 =
14. (-42) ÷ (-7) =
15. 81 ÷ 9 =
16. 144 ÷ (-12) =
17. (-99) ÷ 9=
18. 121 ÷ (-11) =
19. (-132) ÷ (-12) =
20. (-72) ÷ 9 =

Week 6

Change the following to improper fractions:

1. $4\frac{2}{3}$
2. $8\frac{9}{10}$
3. 5
4. $7\frac{2}{9}$
5. $16\frac{1}{3}$

Change the following to mixed numbers:

6. $\frac{18}{4}$
7. $\frac{17}{2}$
8. $\frac{121}{7}$
9. $\frac{483}{10}$
10. $\frac{67}{6}$

Write the following numbers as fractions or mixed numbers:

11. 0.3
12. 4.13
13. 0.27
14. 1.181
15. 0.473

Write the following as decimals:

16. $\frac{7}{8}$
17. $\frac{2}{3}$
18. $\frac{3}{20}$
19. $5\frac{1}{6}$
20. $11\frac{1}{11}$

Week 7

Adding and subtracting fractions require a common denominator. Don't forget to simplify all answers.

1. 3/5 + 4/5=
2. 5/8 + 7/8 + 3/8=
3. 11/24 + 7/24=
4. 2/3 + 5/8=
5. 7/10 + 4/5=
6. 8/9 + 7/8=
7. 3/5 + 5/6=
8. 3/11 + 5/33=
9. 5/16 + 7/8 + 1/12=
10. 2/3 + 3/5 + 5/6=

Subtraction

11. 11/15 - 4/15=
12. 17/18 – 5/18=
13. 17/20 – 13/20=

14. 7/8 – 1/3=
15. 9/20 – 1/4=
16. 7/8 – 2/3=
17. 11/12 – 1/7=
18. 15/16 – 11/12=
19. 17/20 – 3/5=
20. 23/25 – 7/20=

Week 8

1. 5/16 x 2/3=
2. 8/9 x 9/16=
3. 15/16 x 8/25=
4. 11/12 x 6/7=
5. 3/5 x 1/12=
6. 5/6 x 15/16=
7. 6/14 x 12/18=
8. 7/15 x 3/21=
9. 11/20 x 44/55=
10. 4/5 x 3/4=

Dividing fractions- remember to keep the 1st fraction, change the division sign to multiplication, and flip the 2nd fraction.

11. 7/10 ÷ 3/8 =
12. 3/5 ÷ 2/5=
13. 3/8 ÷ 7/10=
14. 5/9 ÷ 2/5=
15. 2/3 ÷ 3/2=
16. 4/7 ÷ 6/7=
17. 1/2 ÷ 7/8=
18. 1/3 ÷ 5/6=
19. 2/3 ÷ 8=
20. 8/9 ÷ 5/6=

Week 9

Change the fractions to percents:

1. 7/8=
2. 2/3=
3. 9/20=
4. 4/9=
5. 27/50=

Change the percents to fractions or mixed numbers:

6. 17%=
7. 84%=
8. 130%=
9. 49%=
10. 500%=

Use the formula: %/100= is/of

11. What is 20% of 300?
12. 38 is what percent of 50?
13. What percent of 7 is 42?
14. 90% of 40 is what number?
15. 75% of what number is 12?
16. What number is 65% of 200?
17. 12 is 600% of what number?
18. What is 50% of 36?
19. What number is 80% of 500?
20. 250% of 44 is what number?

Week 10

1. What is the simplest figure in geometry?
2. What remains equal distance apart and never intersects?
3. What is the general term for four-sided figure?
4. What has one endpoint and continues infinitely in one direction?
5. What is measured in degrees?
6. What is a segment drawn inside a polygon to connect any two nonconsecutive vertices?
7. What is the distance around the outside of a polygon?

8. All points equal distance from a center?
9. What is a polygon with all sides and angles congruent?
10. What is the total number of degrees in a triangle?
11. What is the complement for a 23 degree angle?
12. What is the distance from center to a side in a circle?
13. What is the amount of space inside a two dimensional figure measured in square units?
14. Number of endpoints for a segment
15. What is the supplement for a 35 degree angle?
16. What is a 6 sided polygon?
17. What is a triangle with all sides and angles different?
18. What is a chord that passes through the center of the circle?
19. What are two values for pi and the symbol?
20. What is the symbol for perpendicular?

Week 11

Exponents- write in expanded form and solve:

1. 3^3
2. 4^2
3. 10^4
4. 8^4
5. 2^7

Write in exponent form:

6. 7x7x7x7x7
7. 10x10x10x10
8. (3)(3)(3)yyyyyy
9. (2)(2)wwwwwxxx
10. 5x5x5x5x5x5x5

Change decimals to percent- move decimal 2 places to the right and put the % sign

11. 0.78
12. 8.3
13. 0.027
14. 160
15. 8.042

Change the percent to a decimal: drop the % sign and move the decimal 2 places to the left:

16. 87%
17. 4.12%
18. 135%
19. 62%
20. 45.7%

Final Week-Solve mentally

1. X +7=11
2. 2y=30
3. N+8=12
4. M-12=4
5. m÷3=16
6. 100-y=92
7. 84÷p=7
8. x^2=16
9. 4p=32
10. 50-y=17

Solve these equations using steps

11. X+7=73
12. Y +27=32
13. 17 + m= 74
14. P + 8.3=12.2
15. W + 13= -1
16. M-4= -12
17. Y-27=157
18. W-81=2
19. P-14=41
20. X- (-3)=12

Congratulations!! You are finished 😊

Answer Key

6th grade math review for rising 7th graders at APA

Week one

1. 793 + 817= 1610
2. 88,473 + 277= 88,750
3. 49 + 813 + 551= 1413
4. 9,000 – 877= 8,123
5. 7,321 – 5987= 1,334
6. 15 x 27= 405
7. 380 x 125 = 47,500
8. 55 x 44= 2,420
9. 475 ÷ 25= 19
10. 714 ÷ 42= 17

Order of Operations:

11. 14-(5+7) = 14 - 12 = 2
12. 12- 2 x 3= 12 - 6 = 6
13. 2 x 3 + 9 x 2= 6 + 9 x 2 = 6 + 18 = 24
14. 8 x 10^3 = 8 x 1000 = 8,000
15. 30 – 4 x 2 + 8= 30 - 8 + 8 = 22 + 8 = 30
16. 3 + 5(17+23) = 3 + 5(40) = 3 + 200 = 203
17. 4 (36+14)-100 = 4(50) - 100 = 200 - 100 = 100
18. 7 x 6-(14+16) = 7 x 6 - 30 = 42 - 30 = 12
19. 3 x 4 -3^2 = 3 x 4 - 9 = 12 - 9 = 3
20. (80÷10)-2^3 = 8 - 2^3 = 8 - 8 = 0

Substitute and Solve (a=4, b=5, c=15, and d=1)

21. 6a + c= 6(4) + 15 = 24 + 15 = 39
22. 444-abc = 444 - (4)(5)(15) = 444 - 300 = 144
23. $a^3 + 3$ = $4^3 + 3$ = 64 + 3 = 67
24. $4b^2$ = (4)(5^2) = 4 · 25 = 100
25. (a + 2d)÷3 = (4 + 2 · 1) ÷ 3 = (4 + 2) ÷ 3 = 6 ÷ 3 = 2

Week 2- Decimal addition and subtraction

1. 3.78 + 0.21 = 3.99
2. 42.07 + 38.78 = 80.85
3. 13.2 + 93 = 106.2
4. 80.1 + 0.32 = 80.42
5. 1.245 + 10 = 11.245
6. 0.889 + 0.3 = 1.189
7. 104.98 + 3.203 = 108.183
8. 1.245 + 2.54 = 3.785
9. 1000 + 0.7 = 1000.7
10. 0.8 + 2.02 = 2.82
11. 42.07 – 38.78 = 3.29
12. 5.86 – 1.28 = 4.58
13. 42.3 – 8.76 = 33.54
14. 104.9 – 8.76 = 96.14
15. 20 – 4.3 = 15.7
16. 22.2 – 1.459 = 20.741
17. 0.889 – 0.23 = 0.659
18. 100 – 3.87 = 96.13
19. 17 – 0.394 = 16.606
20. 143.7 – 8.9073 = 134.7927

Week 3

1. 1.32 x 4 = 5.28
2. 0.4 x 0.7 = 0.28
3. 1.5 x 0.27 = 0.405
4. 380 x 1.25 = 475
5. 0.44 x 55 = 24.2
6. 42 x 0.17 = 7.14
7. 1.9 x 6.23 = 11.837
8. 0.23 x 2 = 0.46
9. 4.527 x 10 = 45.27
10. 0.003 x 4.82 = 0.01446
11. 9.81 ÷ 0.3 = 32.7
12. 5.76 ÷ 3.2 = 1.8
13. 38.57 ÷ 0.19 = 203

Multiplying by decimals:

Multiply, count the total decimal places in the factors and then put the decimal in the product.

14. $90.175 \div 2.5 =$ 36.07
15. $2.475 \div 3 =$ 0.825
16. $85 \div 0.5 =$ 170
17. $812 \div 0.04 =$ 20300
18. $180 \div 3.6 =$ 50
19. $14.4 \div 12 =$ 1.2
20. $2{,}445.3 \div 3.3 =$ 741

Week 4

1. $(-13) + (-72) =$ -85
2. $73 + (-67) =$ +6
3. $(-49) + (-82) =$ -131
4. $16 + 39 =$ 55
5. $(-87) + 52 =$ -35
6. $97 + (-82) =$ +15
7. $16 + 17 + (-30) =$ 3
8. $(-18) + 12 + 18 =$ +12
9. $(-17) + (-17) + (-17) + 51 =$ 0
10. $139 + (-500) =$ -361
11. $(-18) - (-30) =$ +12
12. $53 - (-16) =$ +69
13. $(-37) - (+43) =$ -80
14. $30 - (+12) =$ +18
15. $(-16) - (-300) =$ +284
16. $340 - (+400) =$ -60
17. $(-160) - (-160) =$ 0
18. $97 - (+39) =$ +58
19. $(-52) - (+14) =$ -66
20. $(-16) - (+37) + (14) - (-4) =$ -35

Adding integers:

Like signs: add and keep the sign.

Different signs: subtract and keep the sign of the larger digit.

Subtracting integers:

The 1st digit stays the same, change subtraction to addition, and write the opposite of the number following the subtraction sign. Then, use your addition rules.

Week 5

1. $5(-2) =$ -10
2. $(-11)(-7) =$ +77
3. $(-50)(0) =$ 0
4. $5(-12) =$ -60
5. $6(100) =$ 600
6. $2(-2)(-5) =$ 20

When multiplying and dividing, count your negative signs. Odd number of negatives=negative answer. Even number of negatives=positive answer.

7. $3(-13) = -39$
8. $(14)^2 = 196$
9. $(-4)(-1)(-60) = -240$
10. $(-3)(2)(-4) = +24$
11. $14 \div (-2) = -7$
12. $-56 \div (-7) = +8$
13. $(-25) \div 5 = -5$
14. $(-42) \div (-7) = +6$
15. $81 \div 9 = 9$
16. $144 \div (-12) = -12$
17. $(-99) \div 9 = -11$
18. $121 \div (-11) = -11$
19. $(-132) \div (-12) = +11$
20. $(-72) \div 9 = -8$

Week 6

Change the following to improper fractions:

1. $4\frac{2}{3} = \frac{14}{3}$
2. $8\frac{9}{10} = \frac{89}{10}$
3. $5 = \frac{5}{1}$
4. $7\frac{2}{9} = \frac{65}{9}$
5. $16\frac{1}{3} = \frac{49}{3}$

Change the following to mixed numbers:

6. $\frac{18}{4}$ $4\frac{2}{4} = 4\frac{1}{2}$
7. $\frac{17}{2}$ $8\frac{1}{2}$
8. $\frac{121}{7}$ $17\frac{2}{7}$
9. $\frac{483}{10}$ $48\frac{3}{10}$
10. $\frac{67}{6}$ $11\frac{1}{6}$

14. 7/8 – 1/3= $\frac{13}{24}$
15. 9/20 – ¼= $\frac{1}{5}$
16. 7/8 – 2/3= $\frac{5}{24}$
17. 11/12 – 1/7= $\frac{65}{84}$
18. 15/16 – 11/12= $\frac{1}{48}$
19. 17/20 – 3/5= $\frac{1}{4}$
20. 23/25 – 7/20= $\frac{57}{100}$

Week 8

1. 5/16 x 2/3= 5/24
2. 8/9 x 9/16= 1/2
3. 15/16 x 8/25= 3/10
4. 11/12 x 6/7= 11/14
5. 3/5 x 1/12= 1/20
6. 5/6 x 15/16= 25/32
7. 6/14 x 12/18= 2/7
8. 7/15 x 3/21= 1/15
9. 11/20 x 44/55= 11/25
10. 4/5 x 3/4= 3/5

Dividing fractions- remember to keep the 1st fraction, change the division sign to multiplication, and flip the 2nd fraction.

11. 7/10 ÷ 3/8 = $\frac{7}{10} \times \frac{8}{3} = \frac{56}{30} = \frac{28}{15} = 1\frac{13}{15}$
12. 3/5 ÷ 2/5= $1\frac{1}{2}$
13. 3/8 ÷ 7/10= $\frac{15}{28}$
14. 5/9 ÷ 2/5= $1\frac{7}{18}$
15. 2/3 ÷ 3/2= $\frac{4}{9}$
16. 4/7 ÷ 6/7= $\frac{2}{3}$
17. 1/2 ÷ 7/8= $\frac{4}{7}$
18. 1/3 ÷ 5/6= $\frac{2}{5}$
19. 2/3 ÷ 8= $\frac{1}{12}$
20. 8/9 ÷ 5/6= $1\frac{1}{15}$

Write the following numbers as fractions or mixed numbers:

11. 0.3 $\frac{3}{10}$
12. 4.13 $4\frac{13}{100}$
13. 0.27 $\frac{27}{100}$
14. 1.181 $1\frac{181}{1000}$
15. 0.473 $\frac{473}{1000}$

Write the following as decimals:

16. $\frac{7}{8} = 0.875$
17. $\frac{2}{3} = 0.\overline{6}$
18. $\frac{3}{20} = 0.15$
19. $5\frac{1}{6} = 5.1\overline{6}$
20. $11\frac{1}{11} = 11.\overline{09}$

Week 7

Adding and subtracting fractions require a common denominator. Don't forget to simplify all answers.

1. 3/5 + 4/5= $\frac{7}{5} = 1\frac{2}{5}$
2. 5/8 + 7/8 + 3/8= $1\frac{7}{8}$
3. 11/24 + 7/24= $\frac{18}{24} = \frac{3}{4}$
4. 2/3 + 5/8= $1\frac{7}{24}$
5. 7/10 + 4/5= $1\frac{1}{2}$
6. 8/9 + 7/8= $1\frac{55}{72}$
7. 3/5 + 5/6= $1\frac{13}{30}$
8. 3/11 + 5/33= $\frac{14}{33}$
9. 5/16 + 7/8 + 1/12= $1\frac{13}{48}$
10. 2/3 + 3/5 + 5/6= $2\frac{3}{30}$

Subtraction

11. 11/15 - 4/15= $\frac{7}{15}$
12. 17/18 – 5/18= $\frac{2}{3}$
13. 17/20 – 13/20= $\frac{1}{5}$

Week 9

Change the fractions to percents:

1. 7/8= 87.5%
2. 2/3= $66\frac{2}{3}$%
3. 9/20= 45%
4. 4/9= $44\frac{4}{9}$%
5. 27/50= 54%

Change the percents to fractions or mixed numbers:

6. 17%= $\frac{17}{100}$
7. 84%= $\frac{84}{100} = \frac{21}{25}$
8. 130%= $1\frac{3}{10}$
9. 49%= $\frac{49}{100}$
10. 500%= 5

Use the formula: %/100= is/of

11. What is 20% of 300? 60
12. 38 is what percent of 50? 76%
13. What percent of 7 is 42? 600%
14. 90% of 40 is what number? 36
15. 75% of what number is 12? 16
16. What number is 65% of 200? 130
17. 12 is 600% of what number? 2
18. What is 50% of 36? 18
19. What number is 80% of 500? 400
20. 250% of 44 is what number? 110

Week 10

1. What is the simplest figure in geometry? point
2. What remains equal distance apart and never intersects? parallel (symbol ||)
3. What is the general term for four-sided figure? quadrilateral
4. What has one endpoint and continues infinitely in one direction? ray
5. What is measured in degrees? angles
6. What is a segment drawn inside a polygon to connect any two nonconsecutive vertices? diagonal
7. What is the distance around the outside of a polygon? perimeter

8. All points equal distance from a center? circle
9. What is a polygon with all sides and angles congruent? regular
10. What is the total number of degrees in a triangle? 180°
11. What is the complement for a 23 degree angle? $90-23=67°$
12. What is the distance from center to a side in a circle? radius
13. What is the amount of space inside a two dimensional figure measured in square units? area
14. Number of endpoints for a segment two
15. What is the supplement for a 35 degree angle? $180-35=145$
16. What is a 6 sided polygon? hexagon
17. What is a triangle with all sides and angles different? scalene
18. What is a chord that passes through the center of the circle? diameter
19. What are two values for pi and the symbol? 3.14 $\frac{22}{7}$ π
20. What is the symbol for perpendicular? $\perp$

Week 11

Exponents- write in expanded form and solve:

1. $3^3 = 3 \cdot 3 \cdot 3 = 27$
2. $4^2 = 4 \cdot 4 = 16$
3. $10^4 = 10{,}000$
4. $8^4 = 4096$
5. $2^7 = 128$

Write in exponent form:

6. 7x7x7x7x7 7^5
7. 10x10x10x10 10^4
8. (3)(3)(3)yyyyyy 3^3y^6
9. (2)(2)wwwwwxxx $2^2w^5x^3$
10. 5x5x5x5x5x5x5 5^7

Change decimals to percent- move decimal 2 places to the right and put the % sign

11. 0.78 78%
12. 8.3 830%
13. 0.027 2.7%
14. 160 16,000%
15. 8.042 804.2%

Change the percent to a decimal: drop the % sign and move the decimal 2 places to the left:

16. 87% = 0.87
17. 4.12% = 0.0412
18. 135% = 1.35
19. 62% = 0.62
20. 45.7% = 0.457

Final Week-Solve mentally

1. X +7=11 $x=4$
2. 2y=30 $y=15$
3. N+8=12 $N=4$
4. M-12=4 $m=16$
5. m÷3=16 $m=48$
6. 100-y=92 $y=8$
7. 84÷p=7 $p=12$
8. x^2=16 $x=4$
9. 4p=32 $p=8$
10. 50-y=17 $y=33$

Solve these equations using steps

11. X+7=73 $x=67$
12. Y +27=32 $y=5$
13. 17 + m= 74 $m=57$
14. P + 8.3=12.2 $p=3.9$
15. W + 13= -1 $w=-14$
16. M-4= -12 $m=-8$
17. Y-27=157 $y=184$
18. W-81=2 $w=83$
19. P-14=41 $p=55$
20. X- (-3)=12 $x=9$