Saint Michael School
Recommended Summer Math
(For students entering grades 6, 7, and 8)

Dear SMS Jr. High Parents, Guardians, and Students,

The summer math has been selected from the junior high Sadlier-Oxford Textbook Series online "Skills Update" sections.

Please complete only the pages for the grade for which you are entering in the fall.
Do ONLY the EVEN problems on each page.

Use notebook paper if you are accessing these files online and can't print the pages out or if you need more space. Submit all work, including notebook pages, during the first week of school.

Try to spread out the work and not leave it all until the end of summer. Further help can be found at khanacademy.org if additional review of the content is needed.

The worksheets are available for download at school.saint-michael.com

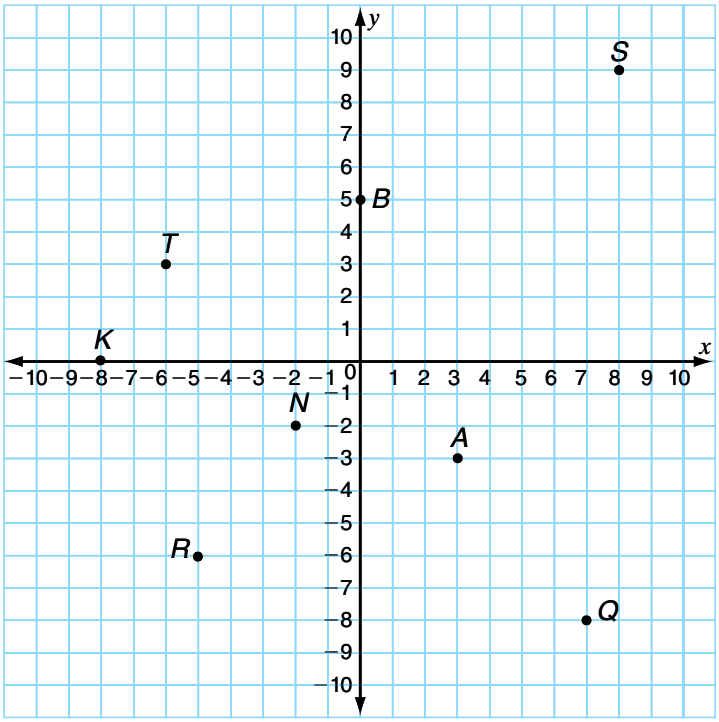
If you have any questions about your summer assignment, please email:
lseeley@saint-michael.com.

Thank you and have a safe, enjoyable summer!

Lauren Seeley
Jr. High Math

Name _____

The Coordinate Plane



Remember:
A coordinate plane is formed by the *x*-axis and the *y*-axis. The point where the axes intersect is (0,0), called the origin.

Find the coordinates for each point.

1. *T* _____ **2.** *A* _____ **3.** *S* _____ **4.** *K* _____

5. *R* _____ **6.** *Q* _____ **7.** *B* _____ **8.** *N* _____

Locate the coordinates for each point on the grid above. Write the quadrant each lies within.

9. *E* (2, 1) _____ **10.** *C* (–5, 9) _____ **11.** *J* (–1, 6) _____ **12.** *G* (5, –4) _____

13. *U* (–9, –1) _____ **14.** *Z* (–9, –8) _____ **15.** *W* (8, 5) _____ **16.** *H* (2, –9) _____

Name _____

Prime and Composite Numbers

Find all the factors for each number.
Write whether the number is prime or composite.

Remember:
A number is *prime* when it has exactly two factors, itself and 1.
A number is *composite* when it has more than two factors.
0 and 1 are neither prime nor composite.

1. 15

_____
Factors of 15: _____

2. 30

_____
Factors of 30: _____
_____

3. 245

_____
Factors of 245: _____
_____

4. 46

_____
Factors of 46: _____

5. 181

_____
Factors of 181: _____

6. 302

_____
Factors of 302: _____

7. 49

_____
Factors of 49: _____

8. 163

_____
Factors of 163: _____

9. 12

_____
Factors of 12: _____

10. 11

_____
Factors of 11: _____

11. 23

_____
Factors of 23: _____

12. 71

_____
Factors of 71: _____

13. 125

_____
Factors of 125: _____

Name _____

Compute.

14. $(24 + 1) \div 5 + 7 \times (11 - 9)$

15. $[-10 + (-6 \times 9)] \div 8$

Simplify.

Remember:
A fraction bar is also a grouping symbol. Do any computation above or below before simplifying.

16. $\dfrac{(14) + (-6)}{-8 - (-4)}$

17. $\dfrac{(2 + 3) - (5 + 6)}{7 + (-5)}$

18. $\dfrac{21 \div (8 - 1)}{6 - 3}$

19. $\dfrac{(17 - 7) - (4 - 2)}{12 - 8}$

20. $\dfrac{(53) + (-9)}{14 - 3}$

21. $\dfrac{2^3 - (5-1)}{7 - 3}$

22. $\dfrac{3 \times (12 - 5)}{4 + 3}$

23. $\dfrac{(12 + 36) \div 6 - 2 \times (8 - 6)}{5^2 - (10 + 11)}$

24. $\dfrac{[16 + (4 \times 6)] \div 5}{2(21 - 19)}$

25. $\dfrac{[56 - (6 \times 4)] \div (-8)}{(4^2) + (-22 + 15)}$

26. $\dfrac{2 \times 7 - [(16 \div 8) + 2]}{5(9 - 2^3)}$

Name _____

Add and Subtract Fractions

Add.

Remember:
Find the least common denominator (LCD) of the fractions.
Rename each fraction as an equivalent fraction with the LCD as the denominator.
Add. Express the sum in simplest form.

1. $\frac{4}{9} + \frac{3}{4} + \frac{1}{2}$

2. $\frac{1}{5} + \frac{12}{15} + \frac{1}{3}$

3. $\frac{1}{7} + \frac{2}{3} + \frac{6}{21}$

4. $\frac{5}{8} + \frac{9}{12} + \frac{2}{3}$

5. $\frac{11}{15} + \frac{7}{10} + \frac{1}{3}$

6. $\frac{1}{9} + \frac{5}{6} + \frac{2}{3}$

7. $\frac{11}{20} + \frac{9}{10} + \frac{3}{4}$

8. $\frac{1}{7} + \frac{2}{5} + \frac{1}{10}$

9. $\frac{7}{12} + \frac{1}{4} + \frac{5}{6}$

10. $\frac{13}{14} + \frac{3}{7} + \frac{1}{2}$

11. $\frac{5}{6} + \frac{15}{18} + \frac{8}{9}$

Name _____

Subtract.

12. $\frac{3}{4} - \frac{2}{3}$

13. $\frac{4}{5} - \frac{1}{2}$

Remember:
Find the least common denominator (LCD) of the fractions.
Rename each fraction as an equivalent fraction with the LCD as the denominator.
Subtract. Express the difference in simplest form.

14. $\frac{5}{12} - \frac{1}{6}$

15. $\frac{1}{2} - \frac{1}{3}$

16. $\frac{2}{3} - \frac{1}{5}$

17. $\frac{7}{8} - \frac{1}{4}$

18. $\frac{11}{13} - \frac{1}{2}$

19. $\frac{4}{7} - \frac{1}{8}$

20. $\frac{2}{5} - \frac{2}{7}$

21. $\frac{1}{3} - \frac{1}{5}$

22. $\frac{9}{10} - \frac{1}{5}$

23. $\frac{1}{3} - \frac{1}{8}$

24. $\frac{1}{2} - \frac{1}{4}$

25. $\frac{6}{9} - \frac{1}{3}$

Name _____

Multiply and Divide Fractions

Remember:
Multiply the numerators. Then multiply the denominators. Write the product in simplest form.

Multiply.

1. $\frac{3}{5} \times \frac{1}{3}$ _____ **2.** $\frac{2}{7} \times \frac{1}{2}$ _____

3. $\frac{11}{13} \times \frac{3}{5}$ _____ **4.** $\frac{1}{5} \times \frac{1}{8}$ _____ **5.** $\frac{3}{8} \times \frac{2}{3}$ _____

6. $\frac{3}{7} \times \frac{2}{3}$ _____ **7.** $\frac{4}{9} \times \frac{5}{6}$ _____ **8.** $\frac{1}{7} \times \frac{1}{7}$ _____

9. $\frac{8}{12} \times \frac{1}{3}$ _____ **10.** $\frac{4}{11} \times \frac{1}{2}$ _____ **11.** $\frac{2}{9} \times \frac{2}{3}$ _____

12. $\frac{1}{5} \times \frac{1}{4}$ _____ **13.** $\frac{1}{7} \times \frac{1}{8}$ _____ **14** $\frac{1}{3} \times \frac{1}{4}$ _____

Remember:
Divide any numerator and denominator by the greatest common factor (GCF). Multiply the numerators. Then multiply the denominators. The product will be in simplest form.

Multiply using the greatest common factor (GCF).

15. $\frac{\cancel{3}}{\cancel{7}} \times \frac{\cancel{14}}{\cancel{15}}$ _____ **16.** $\frac{\cancel{6}}{\cancel{10}} \times \frac{\cancel{2}}{\cancel{4}}$ _____

17. $\frac{1}{\cancel{8}} \times \frac{\cancel{2}}{5}$ _____ **18.** $\frac{1}{\cancel{15}} \times \frac{\cancel{5}}{8}$ _____ **19.** $\frac{1}{\cancel{12}} \times \frac{\cancel{4}}{5}$ _____

20. $\frac{\cancel{8}}{9} \times \frac{1}{\cancel{4}}$ _____ **21.** $\frac{\cancel{5}}{\cancel{10}} \times \frac{\cancel{2}}{4}$ _____ **22.** $\frac{\cancel{22}}{31} \times \frac{1}{\cancel{2}}$ _____

23. $\frac{4}{\cancel{10}} \times \frac{\cancel{2}}{3}$ _____ **24.** $\frac{\cancel{6}}{\cancel{14}} \times \frac{\cancel{7}}{\cancel{8}}$ _____ **25.** $\frac{\cancel{2}}{5} \times \frac{1}{\cancel{4}}$ _____

26. $\frac{4}{\cancel{9}} \times \frac{\cancel{3}}{5}$ _____ **27.** $\frac{\cancel{6}}{13} \times \frac{25}{\cancel{6}}$ _____ **28.** $\frac{\cancel{2}}{5} \times \frac{1}{\cancel{4}}$ _____

Name _____

Divide.

Remember:
Multiply by the reciprocal of the divisor.
Simplify using the GCF, where possible. Then multiply the numerators and the denominators.
Rename the product as a whole or mixed number when needed.

29. $\frac{3}{8} \div \frac{3}{5}$

30. $\frac{1}{6} \div \frac{12}{13}$

31. $\frac{2}{4} \div \frac{3}{6}$

32. $\frac{2}{3} \div \frac{1}{6}$

33. $\frac{4}{5} \div \frac{12}{5}$

34. $\frac{2}{9} \div \frac{2}{8}$

35. $\frac{4}{9} \div \frac{5}{3}$

36. $\frac{15}{17} \div \frac{5}{1}$

37. $\frac{3}{8} \div \frac{15}{8}$

38. $\frac{6}{7} \div \frac{2}{3}$

39. $\frac{1}{9} \div \frac{5}{7}$

40. $\frac{5}{9} \div \frac{1}{5}$

41. $\frac{1}{2} \div \frac{7}{8}$

42. $\frac{6}{9} \div \frac{3}{2}$

43. $\frac{4}{7} \div \frac{8}{21}$

44. $\frac{3}{8} \div \frac{4}{16}$

45. $\frac{5}{6} \div \frac{10}{13}$

Name _____

Order of Operations with Integers

Compute.

Remember:
Order of Operations
1. ( ) before [ ]
2. exponents
3. "×" or "÷" left to right
4. "+" or "−" left to right

1. $24 - 3 \times 5 \div (-5) + 2^2$

2. $[21 + (4 \times 3)] \div 3$

3. $42 \div 7 \times 2$

4. $(11 - 4) \times 6 - 2 \times (-7 + 2)$

5. $[31 + (3 \times 3)\,] \div (-8)$

6. $54 \div 9 + 6 \times 4$

7. $[52 - (2 \times 5)\,] \div 7$

8. $(9 - 2) \times 7 - 1 \times (12 - 2)$

9. $28 - 4 \times 4 \div 8 + (-2^3)$

10. $(14 + 6) \div 5 + 9 \times (-11 + 6)$

11. $[24 + (3 \times 8)\,] \div 6$

12. $(33 - 18) \times 2 - 5 \times (18 - 9)$

13. $-30 + 22 \times 3 \div 6 + (4^2)$

Name _____

Compare and Order Numbers (Decimals)

Use <, =, or > to compare the decimals.

1. 1.876 ◯ 1.097

2. 0.0019 ◯ 0.0019

3. 0.0456 ◯ 0.0765

4. 2.012 ◯ 3.0017

5. 0.5011 ◯ 0.0018

6. 0.0341 ◯ 0.0341

Use place value to order the decimals from greatest to least.

7. 0.6231; 0.6010; 1.003; 0.6229

_____

8. 0.0017; 0.0143; 1.0011; 0.0092

_____

Remember:
Line up the decimal points.
Compare the digits in each place, starting with the greatest place value.

9. 2.485; 2.472; 2.501; 1.982

_____

10. 0.0004; 0.001; 0.0002; 0.0019

_____

11. 0.0910; 0.0911; 0.0903; 0.097

_____

12. 1.0001; 0.0001; 0.001; 1.0010

_____

13. 3.012; 3.021; 0.301; 3.001

_____

14. 0.071; 0.017; 1.0007; 0.0077

_____

Use place value to order the decimals from least to greatest.

15. 0.034; 0.004; 0.013; 1.03

_____

16. 0.0096; 0.0006; 0.0069; 0.0908

_____

17. 5.008; 5.0012; 5.021; 0.508

_____

18. 1.1042; 1.0421; 1.004; 0.142

_____

19. 0.0007; 0.007; 0.701; 0.001

_____

20. 0.057; 0.007; 0.0012; 0.502

_____

21. 1.129; 1.921; 1.2109; 1.09

_____

22. 3.104; 3.001; 4.002; 3.401

_____