

MATH 213 COURSE SCORES, SPRING 2010

Scores for: _____

FRACTIONS, DECIMALS AND PERCENTS SKILLS TEST									
In class	Pass / NP	Individual							
ATTENDANCE AND VOLUNTEERING RECORD									
*mark the days you attend and mark V on the days you volunteer									
Week 1		Week 2		Week 3		Week 4		Week 5	
M M			M			M		M	
T		T T				T		T	
W		W W				W		W	
R		R R				R		R	
Week 6		Week 7		Week 8		Week 9		Week 10	
M		M M				M		Memorial Day	
T		T T				T		T	
W		W W				W		W	
R R			R			R	AES	R	
GRADED HOMEWORK—50%									
Email		Scvng	9.1.2		10.3.	1			
9.1V		9.1 Lab		9.2.1		10.3.2			
9.2V		GSP 9.1	9.2.2		11.1.	1			
9.3V		GSP 9.2	9.2.3		11.1.	2			
9.4V		9.4 Lab	9.3.1		11.1.	3			
10.1V		10.1 Lab	9.3.2		11.2.	1			
10.2V		GSP 10.1	9.3.3		11.2.	2			
10.3V		GSP 10.2	9.4.1		11.3.	1			
11.1V		11.1 Trian.	9.4.2		11.3.	2			
11.2V		GSP 11.1		10.1.1	11.3.	3			
11.3V		GSP 11.2		10.1.2	AES				
Online 9		11.3 Lab		10.1.3					
Online 10		General	10.2.	1					
Online 11		9.1.1		10.2.2					
HW TOTAL ____/____		HW PERCENT ____			HW OF 50 ____				
EXAMS, TOTALS and PROJECTED COURSE GRADE									
EX 1-10		HW-50			PROJECTED COURSE GRADE				
EX 2-10		Total /80			Desired Range				
EX 3-10		Pre-final %		Total / 80 = _____	Needed on Final (20)				
EC					Needed % on Final				
COURSE GRADE SCORE RANGES									
93 –100	A	87 – 89	B+	77 – 79	C+	60 – 69	D		
90 – 92	A-	83 – 86	B	73 – 76	C	Below 60	F		
		80 – 82	B-	70 – 72	C-				

Math 213 Fractions, Decimals, and Percents Skills Test

You are **required** to pass a Fractions, Decimals, and Percents (FD&P) Skills Test in Mth213. There are 21 problems. You must get at least 17 of them correct to pass the FD&P Skills Test. You have 30 minutes in which to do this. YOU MAY NOT USE A CALCULATOR. You may use as much scratch paper as you wish.

The test covers the four basic arithmetic operations on fractions, basic problems involving percents, and decimals (four basic operations and converting rational numbers to fractions). If you know some basic properties of arithmetic, such as the distributive property and the multiplication property of zero, you can do many of the problems very quickly and without pencil-work.

A small amount of time will be provided in class to prepare for the FD&P Skills Test. However, most of your preparation was done in Mth212. You will receive a Practice FD&P Skills Test, and you should do this practice several times until you are **extremely** comfortable with the problems.

One-half hour of class time during the first or second week of the term will be used to administer the FD&P Skills Test to your class. (See your class schedule.) If you pass it at that time you will receive 10 points of extra credit towards your Mth213 grade. If you do not pass it you will need to retake it. In order to do a retake you must call Sharyne Ryals, the math department office manager, at 503-838-8465 to make an appointment. You may also visit her office in MNB 116 to schedule an appointment. There will be NO more class time spent on the FD&P Skills Test in Mth213.

If you pass the test after the initial class offering but before the end of the fourth week of the term you will receive 5 points extra credit towards your grade in Mth213.

**YOU MUST PASS THE FD&P SKILLS TEST ON OR BEFORE
FRIDAY OF DEAD WEEK.**

IF YOU DO NOT, YOU WILL NEED TO RETAKE MTH213.

If you retake the FD&P Skills Test and do not pass it, you should get some help! Immediately! You can see your instructor, use the Tutoring Center, ask another (more skilled) student, and/or review your Mth212 work from the text.

After three retakes of the FD&P Skills Test, if you have still not passed, Sharyne will give you a Retake Permission Slip. You are **required** to take this slip to your instructor before you can proceed. Your instructor will provide you with additional, individual assistance and will then write the number of times you can continue retaking the FD&P Skills Test on the Retake Permission Slip. You must present the completed Retake Permission Slip to Sharyne before further retesting can occur. This process will repeat until you have passed the FD&P Skills Test or until Dead Week ends, whichever comes first.

If you have any questions now is the time to ask! You are encouraged to contact your instructor:

Email: beisiegma@wou.edu

Office Phone: 503-838-8916

DO NOT DELAY PREPARATION FOR THE FD&P SKILLS TEST!!!

PRACTICE FRACTION TEST #1

Make each sentence TRUE by filling in the frame with the SIMPLEST NAME for a fraction, WITHOUT the use of a CALCULATOR! Criterion is AT LEAST 18 correct in ONE-HALF HOUR.

$$1. \quad \frac{3}{10} \div \frac{4}{7} = \boxed{}$$

$$2. \quad \frac{12}{18} - \frac{1}{3} = \boxed{}$$

$$3. \quad 7 \times \left(16\frac{5}{14}\right) = \boxed{}$$

$$4. \quad \frac{3}{8} \times \frac{4}{5} = \boxed{}$$

$$5. \quad \frac{126}{175} = \boxed{}$$

$$6. \quad \boxed{} \div \frac{27}{29} = \frac{1}{27}$$

$$7. \quad \frac{14}{2} = \frac{7}{\boxed{}}$$

$$8. \quad \boxed{} - \frac{1}{4} = \frac{3}{8}$$

$$9. \quad \left(\frac{7}{11} + \frac{9}{44}\right) \times 18 = \frac{7}{11} \times 18 + \boxed{} \times 18$$

$$10. \quad \frac{7}{15} \div \boxed{} = 3$$

$$11. \quad \frac{3}{8} \times \left(\frac{16}{15} \times \boxed{}\right) = \left(\frac{3}{8} \times \frac{16}{15}\right) \times \frac{9}{16}$$

$$12. \quad \left(-\frac{7}{13} + \boxed{}\right) \times \frac{19}{52} = 0$$

$$13. \quad \left(\frac{2}{3} + \frac{1}{6}\right) \times \boxed{} = 1$$

$$14. \quad \frac{\left(\frac{3}{8}\right)}{4} = \boxed{}$$

↓ OVER ↓

$$15. \frac{5}{8} \times \boxed{} = \frac{3}{8}$$

$$16. 16 \times \left(\frac{7}{6} \times \frac{9}{4} \right) = \boxed{}$$

$$17. \frac{7}{15} + \boxed{} = \frac{4}{5}$$

$$18. 8 \times \left(27 \frac{9}{16} \right) = \boxed{}$$

$$19. \frac{16}{45} \times \frac{5}{36} = \boxed{}$$

$$20. \frac{7}{15} + \frac{9}{35} = \boxed{}$$

$$21. \frac{7}{15} - \frac{5}{18} = \boxed{}$$

$$22. \frac{89}{89} \div \frac{87}{91} = \boxed{}$$

ANSWER KEY

- | | | | | | |
|---|--------------------|--|---------------------|--------------------|--------------------|
| 1. $\frac{21}{40}$ | 2. $\frac{1}{3}$ | 3. $\frac{229}{2}$ or $114\frac{1}{2}$ | 4. $\frac{3}{10}$ | 5. $\frac{18}{25}$ | 6. $\frac{1}{29}$ |
| 7. 1 | 8. $\frac{5}{8}$ | 9. $\frac{9}{44}$ | 10. $\frac{7}{45}$ | 11. $\frac{9}{16}$ | 12. $\frac{7}{13}$ |
| 13. $\frac{6}{5}$ or $1\frac{1}{2}$ | 14. $\frac{3}{32}$ | 15. $\frac{3}{5}$ | 16. 42 | 17. $\frac{1}{3}$ | |
| 18. $\frac{441}{2}$ or $220\frac{1}{2}$ | 19. $\frac{4}{81}$ | 20. $\frac{76}{105}$ | 21. $\frac{17}{90}$ | | |
| 22. $\frac{91}{87}$ or $1\frac{4}{87}$ | | | | | |

PRACTICE FRACTION TEST #2

Make each sentence TRUE by filling in the frame with the SIMPLEST NAME for a fraction, WITHOUT the use of a CALCULATOR! Criterion is AT LEAST 18 correct in ONE-HALF HOUR.

$$1. \quad \frac{15}{8} - \frac{7}{8} = \boxed{}$$

$$2. \quad \frac{8}{9} \times \frac{4}{7} = \boxed{}$$

$$3. \quad \frac{2}{9} + \frac{5}{18} = \boxed{}$$

$$4. \quad \frac{9}{16} \div \frac{3}{4} = \boxed{}$$

$$5. \quad \boxed{} \div \frac{3}{14} = 4$$

$$6. \quad \frac{96}{150} = \boxed{}$$

$$7. \quad \boxed{} - \frac{2}{15} = \frac{2}{3}$$

$$8. \quad \frac{15}{\boxed{}} = \frac{25}{50}$$

$$9. \quad \frac{1}{9} - \boxed{} = \frac{1}{12}$$

$$10. \quad \left(\frac{1}{8} + \frac{5}{24} \right) \times \boxed{} = 1$$

$$11. \quad \frac{9}{8} \times \boxed{} = \frac{9}{8} \times \frac{3}{8} + \frac{9}{8} \times \frac{1}{8}$$

$$12. \quad \frac{3}{19} \times \left(\frac{38}{51} \times \boxed{} \right) = \left(\frac{3}{19} \times \frac{38}{51} \right) \times 17$$

$$13. \quad \frac{361}{285} = \boxed{}$$

$$14. \quad \frac{5}{\left(\frac{1}{4} \right)} = \boxed{}$$

↓ OVER ↓

$$15. \frac{5}{8} \times \boxed{} = \frac{3}{8}$$

$$16. \left(39 \times \frac{7}{27} \right) \times \frac{12}{13} = \boxed{}$$

$$17. 7 \times \left(5 \frac{1}{14} \right) = \boxed{}$$

$$18. \frac{5}{12} + \boxed{} = \frac{2}{3}$$

$$19. \frac{5}{13} \div \boxed{} = \frac{10}{3}$$

$$20. \frac{17}{54} + \frac{5}{36} = \boxed{}$$

$$21. \frac{87}{91} \div \frac{29}{56} = \boxed{}$$

$$22. \frac{31}{36} - \frac{5}{12} = \boxed{}$$

ANSWER KEY

$$1. 1 \qquad 2. \frac{32}{63} \qquad 3. \frac{1}{2} \qquad 4. \frac{3}{4} \qquad 5. \frac{6}{7} \qquad 6. \frac{16}{25}$$

$$7. \frac{4}{5} \qquad 8. 30 \qquad 9. \frac{1}{36} \qquad 10. 3 \qquad 11. \frac{1}{2} \qquad 12. 17$$

$$13. \frac{19}{15} \text{ or } 1\frac{4}{15} \qquad 14. 20 \qquad 15. \frac{3}{5} \qquad 16. \frac{28}{3} \text{ or } 9\frac{1}{3} \qquad 17. 35\frac{1}{2} \text{ or } \frac{71}{2}$$

$$18. \frac{1}{4} \qquad 19. \frac{3}{26} \qquad 20. \frac{49}{108} \qquad 21. \frac{24}{13} \text{ or } 1\frac{11}{13} \qquad 22. \frac{4}{9}$$

PRACTICE FRACTION TEST #3

Make each sentence TRUE by filling in the frame with the SIMPLEST NAME for a fraction, WITHOUT the use of a CALCULATOR! Criterion is AT LEAST 18 correct in ONE-HALF HOUR.

$$1. \quad \frac{3}{8} \times \frac{4}{5} = \boxed{}$$

$$2. \quad \frac{6}{7} \div \frac{1}{3} = \boxed{}$$

$$3. \quad \frac{5}{16} + \frac{3}{16} = \boxed{}$$

$$4. \quad \frac{3}{4} - \frac{5}{8} = \boxed{}$$

$$5. \quad 3 \times \left(27\frac{5}{6} \right) = \boxed{}$$

$$6. \quad \boxed{} - \frac{3}{8} = \frac{1}{6}$$

$$7. \quad \boxed{} \div \frac{12}{35} = \frac{7}{8}$$

$$8. \quad \frac{\boxed{}}{3} = \frac{6}{25}$$

$$9. \quad \frac{3}{8} \times \left(\frac{16}{15} \times \boxed{} \right) = \left(\frac{3}{8} \times \frac{16}{15} \right) \times \frac{9}{16}$$

$$10. \quad \left(\frac{2}{3} + \frac{9}{10} \right) \times \boxed{} = 0$$

$$11. \quad \frac{7}{15} \div \boxed{} = 3$$

$$12. \quad \frac{7}{9} \times \boxed{} = \frac{2}{9} \times \frac{5}{6} + \frac{5}{9} \times \frac{5}{6}$$

$$13. \quad \frac{1}{\frac{3}{6}} = \boxed{}$$

$$14. \quad \frac{361}{285} = \boxed{}$$

⇓ OVER ⇓

15. $30 \times \left(\frac{7}{18} \times \frac{4}{63} \right) = \boxed{}$

16. $\boxed{} + \frac{7}{12} = \frac{3}{4}$

17. $\boxed{} + 3\frac{2}{3} = 5\frac{1}{2}$

18. $\frac{1}{8} \times \boxed{} = 5$

19. $\frac{26}{85} \times \frac{34}{39} = \boxed{}$

20. $\frac{13}{14} + \frac{11}{21} = \boxed{}$

21. $\frac{75}{225} \div \frac{125}{375} = \boxed{}$

22. $\frac{27}{32} - \frac{29}{40} = \boxed{}$

ANSWER KEY Practice Test #3

1. $\frac{3}{10}$ 2. $\frac{18}{7}$ or $2\frac{4}{7}$ 3. $\frac{1}{2}$ 4. $\frac{1}{8}$ 5. $83\frac{1}{2}$ or $\frac{167}{2}$ 6. $\frac{13}{24}$

7. $\frac{3}{10}$ 8. $\frac{18}{25}$ 9. $\frac{9}{16}$ 10. 0 11. $\frac{7}{45}$ 12. $\frac{5}{6}$

13. $\frac{1}{18}$ 14. $\frac{19}{15}$ or $1\frac{4}{15}$ 15. $\frac{20}{27}$ 16. $\frac{1}{6}$ 17. $1\frac{5}{6}$ or $\frac{11}{6}$

18. 40 19. $\frac{4}{15}$ 20. $\frac{61}{42}$ or $1\frac{19}{42}$ 21. 1 22. $\frac{19}{160}$

PRACTICE FRACTION TEST #4

Make each sentence TRUE by filling in the frame with the SIMPLEST NAME for a fraction, WITHOUT the use of a CALCULATOR! Criterion is AT LEAST 18 correct in ONE-HALF HOUR.

$$1. \quad \frac{12}{18} - \frac{1}{3} = \boxed{}$$

$$2. \quad \frac{5}{12} \times \frac{9}{10} = \boxed{}$$

$$3. \quad \frac{5}{12} + \frac{1}{3} = \boxed{}$$

$$4. \quad \frac{5}{6} \div 2 = \boxed{}$$

$$5. \quad \frac{120}{140} = \boxed{}$$

$$6. \quad \boxed{} - \frac{1}{16} = \frac{5}{6}$$

$$7. \quad \frac{9}{12} = \frac{\boxed{}}{3}$$

$$8. \quad \boxed{} \div \frac{17}{32} = \frac{4}{3}$$

$$9. \quad \left(\frac{3}{8} + \boxed{} \right) \times \frac{3}{4} = 1$$

$$10. \quad \left(\frac{7}{11} + \frac{9}{44} \right) \times 18 = \frac{7}{11} \times 18 + \boxed{} \times 18$$

$$11. \quad \frac{5}{16} - \boxed{} = \frac{1}{12}$$

$$12. \quad \left(\frac{7}{16} \times \frac{6}{7} \right) \times \frac{13}{18} = \left(\boxed{} \times \frac{6}{7} \right) \times \frac{13}{18}$$

$$13. \quad \frac{204}{228} = \boxed{}$$

$$14. \quad \frac{\frac{3}{8}}{4} = \boxed{}$$

⇓ OVER ⇓

$$15. \frac{4}{9} \div \boxed{} = \frac{1}{6}$$

$$16. \frac{6}{7} \times \left(\frac{12}{17} \times \frac{7}{16} \right) = \boxed{}$$

$$17. \boxed{} - 7\frac{5}{12} = 24\frac{7}{12}$$

$$18. \frac{8}{15} \times \boxed{} = \frac{4}{5}$$

$$19. \frac{24}{19} \times \frac{57}{72} = \boxed{}$$

$$20. \frac{11}{18} - \frac{7}{12} = \boxed{}$$

$$21. \frac{5}{18} + \frac{7}{24} = \boxed{}$$

$$22. \frac{84}{35} \div \frac{78}{65} = \boxed{}$$

ANSWER KEY Practice Test #4

- | | | | | | |
|-------------------------------------|--------------------|-------------------------------------|---------------------|---------------------|--------------------|
| 1. $\frac{1}{3}$ | 2. $\frac{3}{8}$ | 3. $\frac{3}{4}$ | 4. $\frac{5}{12}$ | 5. $\frac{6}{7}$ | 6. $\frac{43}{48}$ |
| 7. $\frac{9}{4}$ or $2\frac{1}{4}$ | 8. $\frac{17}{24}$ | 9. $\frac{23}{24}$ | 10. $\frac{9}{44}$ | 11. $\frac{11}{48}$ | 12. $\frac{7}{16}$ |
| 13. $\frac{17}{19}$ | 14. $\frac{3}{32}$ | 15. $\frac{8}{3}$ or $2\frac{2}{3}$ | 16. $\frac{9}{34}$ | 17. 32 | |
| 18. $\frac{3}{2}$ or $1\frac{1}{2}$ | 19. 1 | 20. $\frac{1}{36}$ | 21. $\frac{41}{72}$ | 22. 2 | |

PRACTICE FRACTION TEST #5

Make each sentence TRUE by filling in the frame with the SIMPLEST NAME for a fraction, WITHOUT the use of a CALCULATOR! Criterion is AT LEAST 18 correct in ONE-HALF HOUR.

$$1. \quad \frac{3}{8} \div \frac{7}{9} = \boxed{}$$

$$2. \quad \frac{3}{4} - \frac{5}{8} = \boxed{}$$

$$3. \quad \frac{6}{7} \times \frac{7}{18} = \boxed{}$$

$$4. \quad \frac{5}{12} + \frac{3}{16} = \boxed{}$$

$$5. \quad 4 \times \left(89\frac{3}{8} \right) = \boxed{}$$

$$6. \quad \frac{2}{3} = \frac{\boxed{}}{18}$$

$$7. \quad \boxed{} \div \frac{5}{6} = \frac{1}{5}$$

$$8. \quad \boxed{} - \frac{5}{9} = \frac{1}{3}$$

$$9. \quad \frac{5}{12} \div \boxed{} = \frac{3}{5}$$

$$10. \quad \frac{17}{18} + \left(\boxed{} + \frac{5}{9} \right) = \left(\frac{17}{18} + \frac{19}{27} \right) + \frac{5}{9}$$

$$11. \quad \left(\frac{1}{6} + \frac{1}{3} \right) \times \boxed{} = 1$$

$$12. \quad \frac{2}{9} \times \frac{5}{6} + \frac{1}{9} \times \frac{5}{6} = \boxed{} \times \frac{5}{6}$$

$$13. \quad \frac{\frac{7}{3}}{3} = \boxed{}$$

$$14. \quad \frac{187}{121} = \boxed{}$$

⇓ OVER ⇓

$$15. \frac{8}{15} \times \boxed{} = \frac{4}{5}$$

$$16. \frac{5}{16} + \boxed{} = \frac{5}{8}$$

$$17. 5\frac{1}{4} + 9\frac{5}{6} = \boxed{}$$

$$18. 30 \times \left(\frac{7}{18} \times \frac{4}{63} \right) = \boxed{}$$

$$19. \frac{38}{45} \times \frac{18}{19} = \boxed{}$$

$$20. \frac{81}{100} \div \frac{99}{100} = \boxed{}$$

$$21. \frac{7}{26} + \frac{17}{39} = \boxed{}$$

$$22. \frac{11}{12} - \frac{9}{16} = \boxed{}$$

ANSWER KEY Practice Test #5

1. $\frac{27}{56}$ 2. $\frac{1}{8}$ 3. $\frac{1}{3}$ 4. $\frac{29}{48}$ 5. $\frac{715}{2}$ or $357\frac{1}{2}$ 6. 12

7. $\frac{1}{6}$ 8. $\frac{8}{9}$ 9. $\frac{25}{36}$ 10. $\frac{19}{27}$ 11. 2 12. $\frac{1}{3}$

13. $\frac{7}{9}$ 14. $\frac{17}{11}$ or $1\frac{6}{11}$ 15. $\frac{3}{2}$ or $1\frac{1}{2}$ 16. $\frac{5}{16}$ 17. $15\frac{1}{12}$ or $\frac{181}{12}$

18. $\frac{20}{27}$ 19. $\frac{4}{5}$ 20. $\frac{9}{11}$ 21. $\frac{55}{78}$ 22. $\frac{17}{48}$

MATH 213 SCAVENGER HUNT DIRECTIONS, SPRING 2010

SCAVENGER HUNT

You will draw a topic the first week of class; your task is to find two references to this topic in two different mathematics textbooks for children.

Procedure

- Draw a topic
- Please write your name on
 - The master class list and
 - By the topic on your personal scavenger hunt topic copy
- Determine your topic due date (look at the online course schedule)
- Go to the state adopted text book section of the Hemersly Library, 2nd floor, head all of the way to the windows in the back, before the windows, on the left, you will find the (labeled) state adopted textbooks. ASK for help if you can't find the books you need. You may also find suitable books in an elementary or middle school classroom.
- Look over a variety of books until you find two good examples / references to your topic in two different grade level books. Don't go past 8th grade if you can help it. Don't go past 9th grade at all. Try to get one low and one higher grade level with different approaches to the topic.
- Double check the example you found is NOT already pictured on our class text book.
- Double check the example you found is NOT really an example for a similar topic listed near your topic.
- Photocopy the page(s) you have found and write a complete reference for each of the books on the corresponding photocopied pages: title, grade level, author name(s), publisher, publication date and ISBN number—look by the book barcode.
- Bring the pages to class to a) share and b) turn in (write your name on them).
- Towards the beginning of class you will be asked to share what you have found with the class—you will be asked to project up the pages and briefly discuss how they relate to the topic and to our class
- This presentation should take about 3 minutes
- If you need help, please ask!

SCAVENGER HUNT MASTER LIST: 213

	TOPIC	§	NAME
1.	Angles (acute, obtuse, etc.)	9.1	
2.	Triangles (acute, right, isosceles, etc.)	9.1	
3.	Polygons	9.2	
4.	Polygon congruence	9.2	
5.	Prisms & Pyramids (not Platonic)	9.3	
6.	Cones, Cylinders or Spheres	9.3	
7.	Platonic Solids	9.3	
8.	Reflection Symmetry (not rotation)	9.4	
9.	Rotation Symmetry (not reflection)	9.4	
10.	Measurement Units: English	10.1	
11.	Measurement Units: Metric	10.1	
12.	Perimeter (polygons)	10.2	
13.	Area (triangles, quadrilaterals)	10.2	
14.	Circles: Circumference, Area	10.2	
15.	Volume: Prisms or Pyramids	10.3	
16.	Volume: Cylinders, Cones or Spheres	10.3	
17.	Surface Area of any 3-D shape	10.3	
18.	Compass constructions (any)	11.1	
19.	Congruent Triangles (ASA, etc.)	11.1	
20.	Mappings: Translation, reflection or rotation	11.2	
21.	Tessellation	11.2	
22.	Scale Factors / Similarity AREA	11.3	
23.	Scale Factors / Similarity VOLUME	11.3	

BBN: Conceptual Approach, page 588: Carefully follow the directions and

1. Draw a **REGULAR PENTAGON** using the Vertex Angle technique.
2. Draw a **REGULAR HEXAGON** using the Inscribed Polygon in a Circle technique
3. Draw a **REGULAR HEPTAGON** using either the Vertex Angle technique or the Inscribed Polygon in a Circle technique.

Polygon Vertex Angles

Sum

Regular Polygons: Vertex Angles

Congruence

Definition

Examples

Regular Polygons

Definition

Examples

Tessellation

Definition

Triangles?

Quadrilaterals? Convex or concave?

Pentagons?

Hexagons?

Regular Tessellations

Definition

Examples

Semi-Regular Tessellations

Definition

Examples

Polyhedron (polyhedra)		
Definition Polyhedron		
Definition Polyhedron Edge	Definition Polyhedron Face	Definition Polyhedron Vertex
Definition Solid		
Definition Convex Polyhedron		
Definition Concave Polyhedron		
Definition Regular Polyhedron		
Platonic Solids		
Cube (hexahedron)		
Tetrahedron		
Octahedron		
Dodecahedron		
Icosahedron		
Definition Semi-Regular Polyhedron		

Pyramids and Prisms
Definition Pyramid
Examples
Example D
Definition Prism
Examples
Cones and Cylinders
Definition Cone
Examples
Definition Cylinder
Examples

Spheres

Definition Sphere

Meridians of Latitude

Definition

Examples

Meridians of Longitude

Definition

Examples

Problem #19

1. Imagine a cube made of $3 \times 3 \times 3$ smaller cubes glued together. If you dip the large $3 \times 3 \times 3$ cube in paint and then pull the large cube apart into 27 small cubes; how many of the small cubes will have:
 - a. Paint on exactly 0 faces?
 - b. Paint on exactly 1 face?
 - c. Paint on exactly 2 faces?
 - d. Paint on exactly 3 faces?
 - e. Paint on 4 or more faces?

2. Imagine a cube made of $4 \times 4 \times 4$ smaller cubes glued together. If you dip the large $4 \times 4 \times 4$ cube in paint and then pull the large cube apart into 64 small cubes; how many of the small cubes will have:
 - a. Paint on exactly 0 faces?
 - b. Paint on exactly 1 face?
 - c. Paint on exactly 2 faces?
 - d. Paint on exactly 3 faces?
 - e. Paint on 4 or more faces?

3. Repeat to extend this idea to any big cube made in this way. Organize your data in this table. Hint Look for general patterns in finding the cubes with 0, 1, 2, and 3 faces painted. Don't just look at the total numbers in the first three rows of the following table.

Dimensions	0 faces painted	1 face painted	2 faces painted	3 faces painted	≥ 4 faces painted
$3 \times 3 \times 3$					
$4 \times 4 \times 4$					
$5 \times 5 \times 5$					
$6 \times 6 \times 6$					
$n \times n \times n$					

Math 213, Section 10.2 Problem Solving

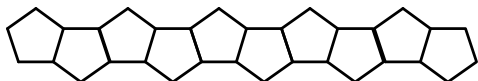
1. Explain how to get the area formula for a parallelogram in a way that a child would understand.
2. Explain how to get the area formula for a trapezoid in a way that a child would understand.
3. 10.2 Problem Opener
 - a. Original: Each of the 10 equilateral triangles in the following figure has sides of length 1 unit, and the perimeter of the entire figure is 12 units. What will the perimeter of the figure be if it is extended to include 50 such triangles?



- b. Extension 1: Each of the 10 squares in the following figure has sides of length 1 unit, and the perimeter of the entire figure is _____ units. What will the perimeter of the figure be if it is extended to include 50 squares?



- c. Extension 2: Each of the 10 pentagons in the following figure has sides of length 1 unit, and the perimeter of the entire figure is _____ units. What will the perimeter of the figure be if it is extended to include 50 pentagons?



4. Section 10.2 Questions #30, 32, 34 and 36.

Mappings
Congruent Polygons
Corresponding Sides
Corresponding Angles
Examples
Traingle Congruence Properties
Side – Side – Side (SSS)
Examples
Side – Angle – Side (SAS)
Examples

Angle – Side – Angle (ASA)

Examples

SSA: Not a property

Examples

11.1 Triangle Activity

Math 213

For the ten triangles on the next page: Carefully decide which triangles are congruent. Angles that look like right angles are right angles.

- a. For each congruent pair, state the congruence relationships such as $\overline{AB} \cong \overline{CD}$ or $\angle A'' A' A \cong \angle B' B'' B$.
- b. For each congruent pair, explain which congruence property (SSS, SAS, ASA) determines the congruence.

<p>1</p> <p> $m\overline{US} = 5.00\text{ cm}$ $m\overline{TU} = 3.00\text{ cm}$ $m\angle STU = 90.00^\circ$ </p>	<p>6</p> <p> $m\angle CAT = 90.00^\circ$ $m\overline{AC} = 3.00\text{ cm}$ $m\angle TCA = 45.00^\circ$ </p>
<p>2</p> <p> $m\angle ZXY = 90.00^\circ$ $m\overline{XY} = 4.00\text{ cm}$ $m\overline{ZX} = 3.00\text{ cm}$ </p>	<p>7</p> <p> $m\angle NML = 55.00^\circ$ $m\overline{LN} = 3.00\text{ cm}$ $m\angle MNL = 70.00^\circ$ </p>
<p>3</p> <p> $m\angle ABC = 115.00^\circ$ $m\overline{CA} = 5.06\text{ cm}$ $BC = 3.00\text{ cm}$ </p>	<p>8</p> <p> $m\overline{ED} = 5.06\text{ cm}$ $CD = 3.00\text{ cm}$ $m\angle DCE = 115.00^\circ$ </p>
<p>4</p> <p> $m\angle ODG = 70.00^\circ$ $m\angle DOG = 55.00^\circ$ $m\overline{DO} = 3.00\text{ cm}$ </p>	<p>9</p> <p> $DE = 3.00\text{ cm}$ $EF = 3.00\text{ cm}$ $m\angle DFE = 30.00^\circ$ </p>
<p>5</p> <p> $m\overline{PR} = 3.00\text{ cm}$ $m\overline{RS} = 3.00\text{ cm}$ $m\angle PRS = 90.00^\circ$ </p>	<p>10</p> <p> $m\angle VUW = 30.00^\circ$ $VU = 3.00\text{ cm}$ $WV = 3.00\text{ cm}$ </p>

Translations

Example A

Reflections

Lines of Reflection

Examples

Rotations

Points of Rotation

Examples

Compositions of Mappings

Glide Reflection

Examples

Example D

Similarity and Scale Factors

Example A

Similar Figures: Definition

Similar Polygons

Definition

Examples B & C

Similar Triangles

Definition

Example D

Angle-Angle Similarity Property
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Example E

Side-Side-Side Similarity Property
Examples F & G
Scale Factors—Surface Area & Volume
Example H—Surface Area
Example H—Volume