1. Convert to a mixed number: \[ \frac{42}{5} \]

2. Convert to an improper fraction: \[ 6\frac{3}{8} \]

3. Reduce to lowest terms: \[ \frac{45}{90} \]

4. Simplify and reduce: \[ 25 \div \frac{5}{6} \]

5. Find equivalent fraction: \[ \frac{3}{8} \cdot \frac{9}{\?} \]

6. Multiply and reduce: \[ \frac{3}{5} \cdot \frac{20}{21} \]

7. \[ \frac{2}{3} \] of what is 12?

8. Simplify and reduce: \[ \frac{1}{16} + \frac{3}{16} \]

9. A rectangle has length \( \frac{3}{4} \) and width \( \frac{2}{3} \). Find the area and the perimeter.

10. Simplify and reduce, if possible: \[ \frac{3}{8} + \frac{5}{6} \]

11. Fill in the blank with < or >: \[ \frac{3}{4} \bigg\< \bigg\frac{2}{3} \]

12. Simplify and reduce, if possible: \[ \left( \frac{1}{2} \right)^2 + \frac{1}{3} \cdot \frac{3}{8} \]

13. Proper or improper?
   a. \( \frac{5}{5} \)  
   b. \( \frac{10}{21} \)

14. In a class of 36 students, \( \frac{4}{9} \) are males. How many students are females?

15. Answer TRUE or FALSE:
   a. \( \frac{12}{11} \) is a proper fraction  
   b. \( \frac{0}{5} \) is equivalent to \( \frac{5}{0} \)

16. Convert to a fraction or mixed number (be sure to reduce to lowest terms!):
   a. 0.006  
   b. 5.35

17. Round 2.5976 to the hundredths:

18. Write as a decimal:
   a. \( \frac{7}{8} \)  
   b. \( \frac{5}{6} \)

19. a. Add: \( 23.097 + 2.34 \)  
   b. Subtract: \( 23 - 0.207 \)

20. Divide: \( .525 \div 2.1 \)  

21. Write in lowest terms: \( 2.4 \text{ to } 3.2 \)

22. Multiply: \( 5.21 \cdot 3.2 \)

23. TRUE or FALSE: \( \frac{2.5}{8} = \frac{10}{32} \)

24. Solve for \( x \): \( \frac{2}{6} = \frac{5}{x} \)

25. Write in order from smallest to largest: \( 0.31, 0.3, 0.04, 0.33, 0.03, 0.41, 0.4 \)

26. Which is a better buy?: \$19.20 for 8 ounces or \$30 for 12 ounces

27. Fill the blank with < or >: \[ \frac{5}{9} \bigg\< 0.5 \]

28. A car can travel 150 miles on 4 gallons of gasoline. How far can the car travel on a full tank of 18 gallons?

29. In a math class, 6 out of 7 students passed the latest test. If there are 42 students in the class, how many passed?
30. TRUE or FALSE: \( \frac{1}{3} \) is smaller than \( 0.3 \)

31. Convert to a percent: 0.6

32. Convert to a decimal:
   a. 95%
   b. 3%

33. Convert to a fraction and reduce to lowest terms:
   a. 60%
   b. 1.2%

34. Convert to a percent: \( \frac{1}{4} \)

35. What percent of 250 is 10?

36. 24 is 15% of what number?

37. CSUN has approximately 12,000 female students. If this represents 60% of the total students population, find the total student population.

38. The price of a DVD player in 2001 was $200. Currently DVD players sell for $150. Find the percent decrease.

39. Sales tax in the state of California is approximately 8%. A brand new Toyota Camry costs $20,000 (before taxes).
   a. Find the amount of sales tax.
   b. Find the total cost of the car.

40. A shirt is usually priced at $42. This weekend it will be sold for 40% off.
   a. What is the discount amount?
   b. What is the sale price?

41. In the triangle to the right:
   \( m\angle A = 91^\circ \) and \( m\angle C = 43.2^\circ \)
   a. Find \( m\angle B \)
   b. Is \( \angle A \) acute, obtuse, or right?

42. a. Find the supplement of 29°
   b. Find the complement of 32°

43. a. Find the perimeter of the triangle (height = 2 cm)
   b. Find the area of the triangle

44. Find the area of a rectangle with length 2 feet and width 10 feet.

45. Find the volume: Diameter = 12 inches
   Height = 15 inches

46. Find the volume:

47. If the diameter of the circle is 5 feet, find the circumference and the area of this circle.

48. Find the mean of the following data: 12, 9, 3, 17, 5, 2
49. Consider the following data: 10, 8, 3, 2, 3, 10, 18, 20
   a. find the **median**
   b. find the **mode(s)**

50. Find the missing side of the right triangle below:

```
   6
   10
```

51. Find the volume of a cone with radius 9 meters and height 4 meters.

52. Find each absolute value:
   a. \(|-3|\)
   b. \(|23|\)

53. Find the opposite of each:
   a. \(-3\)
   b. 23

54. Factor: \(10x - 15y + 25z\)

55. Subtract:
   a. \(-9 - 9\)
   b. \(4 - 21\)

56. Multiply:
   a. \((-2.3) \cdot (4.2)\)
   b. \((-3) \cdot (-12)\)

57. Subtract: \(-\frac{3}{4} - \frac{3}{8}\)

58. Divide: \(-\frac{2}{3} ÷ \frac{2}{9}\)

59. Simplify: \(4(x - 3y + 5z)\)

60. Simplify: \((6x - 3y) - (4x + 5y)\)

61. Solve for x: \(8(x - 2) = 3x - 4\)

62. Solve for x: \(\frac{3}{5}x = -5\)

63. Simplify:
   a. \(x^{12} \cdot x^{-7}\)
   b. \((x^4 y^{-3})^2\)

64. Use order of operations to simplify: \(5 + 2 \cdot (5 - 9) - (-4)^2\)

65. Use order of operations to simplify: \(\frac{-4 \cdot 15 - (5 - 7)}{5}\)
### ANSWERS REVIEW FINAL EXAM I

<table>
<thead>
<tr>
<th></th>
<th>1. ( \frac{82}{5} )</th>
<th>2. ( \frac{51}{8} )</th>
<th>3. ( \frac{1}{2} )</th>
<th>4. 30</th>
</tr>
</thead>
</table>
| 5. | 24 | 6. \( \frac{4}{7} \) | 7. 18 | 8. \( \frac{1}{4} \)
| 9. | \( A = \frac{1}{2} \); \( P = \frac{25}{6} \) | 10. \( \frac{15}{24} \) | 11. > | 12. \( \frac{3}{8} \)
| 13a. | improper | 13b. proper | 14. 20 females | 15a. False; improper |
| 15b. | False; \( \frac{0}{5} = 0 \) but \( \frac{5}{0} \) is undefined | 16a. \( \frac{3}{500} \) | 16b. \( \frac{57}{20} \) |
| 17. | 2.60 | 18a. 0.875 | 18b. 0.83 | 19a. 25.437 |
| 19b. | 23 – 0.207 | 20. 0.25 | 21. \( \frac{3}{4} \) | 22. 16.672 |
| 23. | True | 24. \( x = 15 \) | 25. 0.03, 0.04, 0.31, 0.33, 0.3, 0.41, 0.4 | 26. \( 19.20 \) for 8 ounces is best buy |
| 27. | > | 28. 675 miles |
| 29. | 36 students | 30. False | 31. 60% | 32a. 0.95 |
| 32b. | 0.03 | 33a. \( \frac{3}{5} \) | 33b. \( \frac{3}{250} \) | 34. 25% |
| 35. | 4% | 36. 160 | 37. 20,000 students in total | 38. 25% |
| 39a. | \( \$1600 \) | 39b. \( \$21600 \) | 40a. \( \$16.80 \) | 40b. \( \$25.20 \)
| 41a. | 45.8° | 41b. Obtuse | 42a. 151° | 42b. 58° 43° 17 \( \frac{1}{3} \)
| 43a. | \( P = 13.6 \) | 43b. \( A = 6 \) cm \(^2\) | 44. \( 20 \) ft \(^2\) | 45. \( V = 540\pi \) in \(^3\)
| 46. | \( V = 60 \) | 47. \( C = 5\pi \) ft | 48. \( 8 \) | 49a. 9 |
| 49b. | 3, 10 | 50. 8 | 51. \( V = 108\pi \) m \(^3\) | 52a. 3 |
| 52b. | 23 | 53a. – 3 | 53b. – 23 | 54. \( 5(2x – 3y + 5z) \)
| 55a. | –18 | 55b. –17 | 56a. –9.66 | 56b. 36 |
| 57. | –\( \frac{1}{8} \) | 58. –3 | 59. \( 4x – 12y + 20z \) | 60. \( 2x – 8y \)
| 61. | \( x = 2\frac{2}{5} \) | 62. \( x = –8\frac{1}{3} \) | 63a. \( x^5 \) | 63b. \( \frac{x^8}{y^6} \)
| 64. | –19 | 65. –10 | 66. |