

Basic Mathematics Math 20 – Final Review

1. Round to the nearest hundred: 82,549
a) 83,000 b) 82,500 c) 82,600 d) 82,550
2. Divide: $610,000 \div 1000$
a) 61 b) 6100 c) 610 d) 6.1
3. Divide: $53,802 \div 854$
a) 63 b) 513 c) 62.10 d) 51.3
4. Find the mean (average), median, & mode of: 32, 56, 41, 47, 56, 39, 44
a) mean 45, median 44, mode 56 b) mean 45, median 47, mode 56
c) mean 45, median 56, mode 44 d) mean $40\frac{5}{7}$, median 56, mode 44
5. Perform the indicated operations: $8 \cdot 4 + 2 - 5(9 - 4)$
a) -15 b) 17 c) 23 d) 9
6. Find the least common multiple (LCM) of: 8, 12, 16
a) 4 b) 16 c) 48 d) 8
7. Is the following number prime or composite? 79
a) composite b) neither c) prime d) both
8. Write the prime factorization of 345.
a) $3 \cdot 115$ b) $3 \cdot 5 \cdot 23$ c) $15 \cdot 23$ d) $5 \cdot 69$
9. Is $\frac{25}{17}$ an improper or proper fraction?
a) improper b) proper c) both d) neither
10. Simplify: $\frac{90}{210}$
a) $\frac{9}{21}$ b) $\frac{3}{7}$ c) $\overline{.428571}$ d) $\frac{30}{70}$
11. Multiply & Simplify: $\frac{5}{9} \cdot \frac{20}{28} \cdot \frac{3}{25}$
a) $\frac{5}{35}$ b) $\frac{5}{105}$ c) $\frac{1}{21}$ d) $\frac{300}{6300}$
12. Divide: $11\frac{1}{5} \div 12\frac{3}{5}$
a) $132\frac{1}{3}$ b) $\frac{3528}{25}$ c) $141\frac{3}{25}$ d) $\frac{8}{9}$
13. List the numbers from smallest to largest: $\frac{5}{6}, \frac{1}{2}, \frac{2}{5}, \frac{13}{30}$

a) $\frac{5}{6}, \frac{1}{2}, \frac{2}{5}, \frac{13}{30}$

b) $\frac{2}{5}, \frac{13}{30}, \frac{1}{2}, \frac{5}{6}$

c) $\frac{1}{2}, \frac{2}{5}, \frac{5}{6}, \frac{13}{30}$

d) $\frac{2}{5}, \frac{13}{20}, \frac{1}{2}, \frac{5}{6}$

14. Add: $4\frac{7}{15} + 2\frac{2}{3}$

a) $6\frac{1}{2}$ or $\frac{13}{2}$

b) $7\frac{2}{15}$ or $\frac{107}{15}$

c) $6\frac{3}{5}$ or $\frac{33}{5}$

d) 5

15. Subtract: $\frac{13}{15} - \frac{9}{20}$

a) $\frac{5}{12}$

b) $-\frac{4}{5}$

c) $\frac{2}{30}$

d) $\frac{25}{0}$

16. Subtract: $693.2 - 413.98$

a) 289.22

b) 280.78

c) 344.66

d) 279.22

17. Multiply: 3.456×10^5

a) 3456

b) 34,560

c) 0.00003456

d) 345,600

18. Write the following number in scientific notation: 0.0000345

a) 3.45×10^{-5}

b) 3.45×10^5

c) 3.45×10^{-4}

d) 3.45×10^4

19. Multiply: $(23.55)(6.13)$

a) 14,436.15

b) 2.355

c) 144.3615

d) 235.5

20. Divide; round to the nearest hundredth: $213.8 \div 33.7$

a) 0.63

b) 6.34

c) 6.3

d) 6.344

21. Write as a decimal: $\frac{11}{16}$

a) 0.6875

b) 0.11

c) $1.45\overline{36}$

d) 11.16

22. Perform indicated operations: $3(5.4 - 3.6) - (1.2)^2 - 2(1.6)$

a) -0.2

b) 7.96

c) 3.64

d) 0.76

23. In Ms. Adam's algebra class there are 22 females and 18 males. Write a simplified ratio that represents the female population in class.

a) $\frac{11}{9}$

b) $\frac{9}{11}$

c) $\frac{11}{20}$

d) $\frac{20}{11}$

24. Solve: $\frac{4}{9} = \frac{48}{A}$

a) $\frac{64}{3}$

b) 108

c) 12

d) $\frac{1}{12}$

25. Safeway advertises bananas at 3 lb for \$2.16. At this rate, what will 14 lb of bananas cost?

a) \$10.08

b) \$30.24

c) \$0.15

d) \$19.44

38. Find the circumference of a circle that has a diameter of 2.5 cm. Let $\pi \approx 3.14$.

- a) 7.85 cm b) 4.91 cm^2 c) 7.85 cm^2 d) 19.625 cm

39. Find the area of a triangle that has a base of 11 ft and height of 8 ft.

- a) 19 ft b) 44 ft^2 c) 19 ft^2 d) 88 ft^2

40. Find the area of a circle with diameter of 6 cm. Let $\pi \approx 3.14$.

- a) 18.84 cm b) 113.04 cm^2 c) 18.84 cm^2 d) 28.26 cm^2

41. Find the volume of a cube that is 13 m on a side.

- a) 2197 m^3 b) 169 m^2 c) 169 m^3 d) 2197 m^2

42. Find the volume of a cylinder with radius of 3 cm and a height of 4 cm. Let $\pi \approx 3.14$.

- a) 113.04 cm^2 b) 37.68 cm^3 c) 37.68 cm^2 d) 113.04 cm^3

43. Find the length of the missing leg of a right triangle with the hypotenuse of 20 ft and a leg of 16 ft.

- a) 144 ft b) 656 ft c) 12 ft^2 d) 12 ft

44. Perform the indicated operations: $(7 - 4)(4)(-3) + 6|7 - 9|$

- a) -24 b) -48 c) -3 d) 67

45. $4x - 16 = 12$

- a) $x = 18$ b) $x = 7$ c) $x = 24$ d) $x = -1$

46. $\frac{y}{3} - 7 = 4$

- a) $y = 19$ b) $y = 33$ c) $y = -9$ d) $y = \frac{11}{3}$

47. $45 = 6x + 9$

- a) $x = 6$ b) $x = -\frac{4}{3}$ c) $x = 30$ d) $x = 9$

48. $7x + 25 = -10$

- a) $x = 5$ b) $x = -5$ c) $x = -\frac{15}{7}$ d) $x = -\frac{185}{7}$

49. $-6x + 21 = -21$

- a) $x = -7$ b) $x = 0$ c) $x = 7$ d) $x = 6$

50. $5x - 43 = 12x - 43$

- a) $x = 37$ b) $x = 7$ c) $x = -86$ d) $x = 0$

Final Review - Key

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|-------|-------|
| 1. b | 26. a |
| 2. c | 27. b |
| 3. a | 28. c |
| 4. a | 29. d |
| 5. d | 30. d |
| 6. c | 31. a |
| 7. c | 32. a |
| 8. b | 33. b |
| 9. a | 34. b |
| 10. b | 35. c |
| 11. c | 36. c |
| 12. d | 37. c |
| 13. b | 38. a |
| 14. b | 39. b |
| 15. a | 40. d |
| 16. d | 41. a |
| 17. d | 42. d |
| 18. a | 43. d |
| 19. c | 44. a |
| 20. b | 45. b |
| 21. a | 46. b |
| 22. d | 47. a |
| 23. c | 48. b |
| 24. b | 49. c |
| 25. a | 50. d |