

Please do not use calculators for this part of the exam.

1. 12% of the students who pass Math 016 go on to take Calculus. If there are 400 students who pass Math 016, how many take Calculus?
2. The sales tax in Philadelphia is 7%. If a TV cost \$500, what is the final price?
3. The price of home heating oil is \$1.95 per gallon. How much does it cost to fill up a 100-gallon tank?
4. The price of home heating oil rises from \$1.95 per gallon to \$2.15 per gallon. What is the increase in dollars?
5. What is the increase as a percent? Round your answer to the nearest percent.
6. A shoe store is having a 20% off sale. What is the price of a pair of shoes that originally cost \$85.00?

7. A 12-pound turkey breast contains 40 servings of meat. How many pounds of turkey breast would be needed for 60 servings?
8. If it takes 12 gallons of gasoline to drive 366 miles, what is the gas mileage (miles per gallon)?
9. The temperature in Antarctica is  $-17$  degrees. If the temperature increases 25 degrees, what is the new temperature?

10. The formula for converting from Celsius to Fahrenheit is

$$F = \frac{9}{5}C + 32$$

The boiling point of water is 100 degrees Celsius. What is it in Fahrenheit?

11. The freezing point of water is 0 degrees Celsius. What is it in Fahrenheit?

12. Add:  $3+(-8)$

16.  $-8+(-9)$

17. Subtract:  $6-10$

18.  $-9-10$

19. Multiply:  $(2)\times(3)\times(-3)$

20.  $\left(\frac{1}{2}\right)\times\left(-\frac{10}{3}\right)$

21.  $3.15\times 1000$

22.  $12.5\times 5$

23.  $3.2\times 1.5$

24.  $0.3\times 0.4$

25. Add:  $2\frac{1}{2} + 3\frac{1}{2}$

26.  $4\frac{1}{2} + 3\frac{1}{4}$

Convert the mixed numbers to fractions:

27.  $2\frac{1}{3}$

28.  $3\frac{1}{4}$

29. Multiply:  $2\frac{1}{3} \times 3\frac{1}{4}$

30. Divide:  $2\frac{1}{3} \div 3\frac{1}{2}$

Multiply, reduce to lowest terms:

31.  $\frac{4}{5} \times \frac{5}{4}$

32.  $\frac{7}{3} \times \frac{5}{2}$

33.  $4 \times \frac{8}{7}$

34. Divide:  $12 \div \frac{4}{3}$

35. Add:  $\frac{2}{11} + \frac{7}{11}$

36.  $\frac{1}{3} + \frac{5}{4}$

37.  $12.05 + 5.75$

38.  $10.95 + 8.05$

39. Subtract:  $\frac{11}{12} - \frac{2}{12}$

40.  $4.9 - 5$

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

42.  $5 - \frac{1}{2}$

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

44.  $3.14 - 2.065$