Math Calculations for Pharmacy Technicians 4th edition Beale Test Bank

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MULTIPLE CHOICE

1. 1/2 + 3/4
   a. 5/4
   b. 1 1/4
   c. 2/3
   d. 5/4 or 1 1/4

   ANS: D
   Use the common denominator of 4 so that 1/2 becomes 2/4 + 3/4 = 5/4 or (1 1/4).

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   OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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2. If an order is written for one tab q8h × 7 d, how many are needed to fill the entire prescription?
   a. 14
   b. 21
   c. 28
   d. Not enough information

   ANS: B
   3 tabs/day × 7 days = 21 tabs.

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3. A patient is ordered to take 3 tabs bid for one week. How many tablets are needed to fill the prescription?
   a. 21
   b. 28
   c. 35
   d. 42

   ANS: D
   3 tabs/dose × 2 doses/day (bid) × 7 days (one week) = 42 tabs.

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4. A pharmacy has an inventory reorder point of 200 capsules of an antibiotic. If the total amount of medication on hand is 800 capsules, what percentage is left when the reorder point is reached?
   a. 10%
   b. 25%
   c. 33.3%
   d. 50%

   ANS: B
   $x/100 = 200/800$ reduce to $x/100 = 1/4$
   $4x = 100$
   $x = 25$
   25%.

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5. A physician orders 45 tablets to be taken one three times a day. If 15 tablets have been taken, what percentage of tablets has the patient taken?
   a. 10%
   b. 25%
   c. 33.3%
   d. 50%

   ANS: C
   $x/100 = 15/45$ reduce to $x/100 = 1/3$
   $3x = 100$
   $x = 33.3$
   33.3%.

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6. The inventory for a medication is 450 tablets and it is to be replenished at 50%. At what number of tablets should the medication be reordered?
   a. 200
   b. 225
   c. 250
   d. 275

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ANS: B
50/100 = *x*/450 reduce to 1/2 = *x*/450
2*x* = 450
x = 225.

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7. The budgeted amount for a year for a medication is $1,800. What is the budgeted amount for each month?
   a. $120
   b. $140
   c. $150
   d. $180

ANS: C
$1,800 ÷ 12 = $150.

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8. Change 54/26 to a mixed number and reduce to lowest possible terms.
   a. 2
   b. 2 2/26
   c. 2 1/13
   d. 1 25/26

ANS: C
54 ÷ 26 = 2 2/26, which reduces to 2 1/13.

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9. Change the following to an *improper* fraction and *reduce* to lowest terms: 2 4/6.
   a. 2 2/3
   b. 14/6
   c. 16/6
   d. 8/3

ANS: D
2 × 6 = 12, 12 + 4 = 16 so 16/6, which reduces to 8/3.

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10. A prescription requires 3/4 of a pint of water for reconstitution. The only measuring device available measures 1/3 pint. How many times should this container be filled to make 3/4 pint?
    a. 2
    b. 2 1/4
    c. 2 1/3
    d. 2 1/2

    ANS: B
    To calculate how many times you need to fill a 1/3 measuring cup to make 3/4, see how many times 1/3 goes into 3/4, which is 3/4 ÷ 1/3. Invert and multiply so 3/4 × 3/1 = 9/4, which reduces to 2 1/4.

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11. Convert 0.01% to a fraction and reduce to lowest terms.
    a. 1/100
    b. 1/1,000
    c. 1/10,000
    d. No answer is correct

    ANS: C
    0.01% becomes 0.01/100. To remove the decimal point from the numerator, multiply both the numerator and the denominator by 100/100 to equal 1/10,000.

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12. If a patient requires 10 tablets for a 5-day supply, how many are required for 30 days?
    a. 30
    b. 60
    c. 90
    d. 120

    ANS: B
    Use the ratio and proportion method to solve 10 is to 5 as *x* is to 3.

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10/5 = x/30
5x = 300
x = 300 ÷ 5 = 60.

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13. A stock bottle contains 500 tablets. 100 tablets have been used to fill a prescription. What percentage of the container is left?
    a. 90%
    b. 85%
    c. 80%
    d. 75%

ANS: C
500 – 100 = 400; 400/500 = x/100, which reduces to 4/5 = x/100
5x = 400
x = 400 ÷ 5 = 80
80%.

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14. A patient is to take 3 tablets a day for one week. How many tablets are needed to fill the prescription?
    a. 15
    b. 21
    c. 28
    d. 42

ANS: B
3 tablets/day × 7 days = 21 tablets.

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15. 30 tablets are what percent of a 1,000-tablet bottle?
    a. 3%
    b. 15%
    c. 30%

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d. 60%

ANS: A
x/100 = 30/1,000.

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16. What is 60% of 500 g?
a. 30 g
b. 60 g
c. 150 g
d. 300 g

ANS: D
60/100 = *x*/500 g cross multiply and divide or 500 g × 0.6 = 300 g.

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17. How much would a customer save with a 15% discount on a 500-count bottle of low dose aspirin that costs $7.95?
a. $0.79
b. $1.19
c. $1.79
d. $2.19

ANS: B
15/100 = *x*/$7.95 or $7.95 × 0.15 = $1.19.

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18. A patient's insurance only allows a refill when 70% of the prescription has been taken. If a patient has taken 36 capsules out of her prescription of 60 capsules, is she eligible for a refill?
a. No, that is only 40%.
b. No, that is only 60%.
c. Yes, that is 70%.
d. Yes, that is 83%.

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$x/100 = 36/60$
$x = 60$.

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19. A patient only has $5 to purchase his prescription medication. The prescription for 30 tablets costs $25. How many tablets can he afford with $5?
    a. 5
    b. 6
    c. 7
    d. 8

ANS: B
$\$25/30 \text{ tabs} = \$5/x$
$25x = 150 \text{ tabs}$
$x = 6 \text{ tabs}$.

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20. A physician tells a patient to drink eight 8-oz glasses of water per day. How many ounces of water should the patient drink each day to follow this order?
    a. 32 oz
    b. 64 oz
    c. 96 oz
    d. 128 oz

ANS: B
$8 \times 8 = 64$.

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21. A doctor orders a patient to take 975 mg of Tylenol. The tablets available are 325 mg each. How many are needed for one dose?
    a. 2
    b. 3
    c. 4
    d. 5

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ANS: B
975 ÷ 325 = 3.

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22. A child is to be given 2.5 mL of medication four times a day for 10 days. How much is needed for *one* day?
    a. 5 mL
    b. 10 mL
    c. 50 mL
    d. 100 mL

ANS: B
4 × 2.5 mL = 10 mL.

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23. Divide 102.34 by 12.567 and round the answer to the nearest hundredth.
    a. 8.1
    b. 8.14
    c. 8.143
    d. 8.1436

ANS: B
Only 8.14 is rounded to the hundredths position.

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24. Perform the following subtraction and round to the hundredths place: 654.1 – 45.1256.
    a. 607.97
    b. 608.98
    c. 608.97
    d. 609.9

ANS: C
654.1 – 45.1256 = 608.9744, which rounds to 608.97.

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25. Perform the following division problem: 2 3/8 ÷ 1 5/6.
    a. 1 5/16
    b. 4 17/48
    c. 1 13/44
    d. 1 6/11

    ANS: C
    2 3/8 becomes 19/8; 1 5/6 becomes 11/6; since it is a division problem, invert the second fraction and multiply: 19/8 × 6/11 = 19/4 × 3/11 = 57/44 = 1 13/44.

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26. 3/8 + 7/10 + 3/5 = _____.
    a. 1 17/10
    b. 1 27/40
    c. 1 20/40
    d. 1 27/8

    ANS: B
    Use the LCD of 40 and change all fractions to 40ths: 3/8 becomes 15/40; 7/10 becomes 28/40; 3/5 becomes 24/40. Add 15 + 28 + 24 and place the answer over 40.
    67/40 = 1 27/40.

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27. 1/4 – 1/6 = _____.
    a. 1/2
    b. 1/12
    c. 1/24
    d. 2/3

    ANS: B
    Use the LDC of 12; change 1/4 to 3/12; change 1/6 to 2/12
    3/12 – 2/12 = 1/12.

    DIF: Application

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28. 158 – 59 = _____.
    a. 217
    b. 97
    c. 99
    d. 63

    ANS: C
    99 by definition of subtraction.

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29. 4.502 + 14.06 = _____.
    a. 18.56
    b. 10.81
    c. 18.21
    d. 10.1

    ANS: A
    3.501 + 14.06 = 18.561, which rounds to 18.56.

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30. 3/8 · 5/6 = _____.
    a. 13/42
    b. 1/2
    c. 1/9
    d. 5/16

    ANS: D
    3/8 × 5/6 = 15/48, which reduces to 5/16.

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31. 13.5 · 3.05 = _____.
    a. 10.4
    b. 40.11
    c. 41.18
    d. 23.09

    ANS: C
    13.5 × 3.05 = 41.175, which rounds to 41.18.

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32. 34.3 ÷ 6.5 = _____.
    a. 5.28
    b. 5.19
    c. 4.21
    d. 28.4

    ANS: A
    34.3 ÷ 6.5 = 5.276, which rounds to 5.28.

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33. 3,467.021 – 34.6701 = _____.
    a. 3,674.2
    b. 3,532.1
    c. 3,223.55
    d. 3,432.35

    ANS: D
    After lining up decimals, 3,467.021 – 34.6701 = 3,432.3509, which rounds to 3,432.35.

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34. 465 + 5.098 + 76.5 = _____.
    a. 460.5
    b. 523.75
    c. 546.60

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d. 658.23

ANS: C
After lining up decimals, 465 + 5.098 + 76.5 = 546.598, which rounds to 546.60.

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35. 2 1/2 + 3 1/5 + 1/4 = _____.
a. 5 4/5
b. 5 19/20
c. 4 2/10
d. 5 1/2

ANS: B
2 + 3 = 5, then use the LCD of 20 to add the fractions. 1/2 becomes 10/20, 1/5 becomes 4/20, 1/4 becomes 5/20 so the total is 19/20. 5 + 19/20 = 5 19/20.

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36. 9 3/4 – 1 5/6 = _____.
a. 7 1/6
b. 8 1/5
c. 7 11/12
d. 8 1/2

ANS: C
Change to improper fractions 39/4 and 11/6, use LCD of 12 to obtain 117/12 – 22/12 = 95/12. 95 ÷ 12 = 7 with 11/12 left over.

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37. 76.14 · 7.61 = _____.
a. 69.12
b. 83.77
c. 579.43
d. 32.9

ANS: C

Multiply the two numbers, place the decimal 4 places from the right, and then round to the hundredth's place. 76.14 · 7.61 = 579.4254 = 579.43.

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38. 3.562 + 56.01 + 107.431 = _____.
    a. 267.00
    b. 579.43
    c. 167.00
    d. 546.60

ANS: C
Line up the decimals, add (167.003), and round to the hundredths place.

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39. 1 5/8 ÷ 4/5 = _____.
    a. 1 27/40
    b. 7 11/12
    c. 2 1/32
    d. 8 7/14

ANS: C
Change the mixed number to the improper fraction 13/8, invert and multiply 13/8 × 5/4 = 65/32. Change back to an improper fraction. 65 ÷ 32 = 2 1/32.

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40. 6 3/8 – 4 5/6 = _____.
    a. 1 27/40
    b. 5/16
    c. 2 1/32
    d. 1 13/24

ANS: D
Change both numbers to improper fractions: 51/8 – 29/6. Using the common denominator of 24 change both fractions to 153/24 – 116/24 = 37/24 or 1 13/24.

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41. 1/9 + 4 1/3 + 5 7/8 = _____.
    a. 9 7/8
    b. 10 1/7
    c. 13 1/13
    d. 10 23/72

    ANS: D
    Change 4 1/3 to 13/3. Change 5 7/8 to 47/8. Then, using the LCD of 72 change the fractions to 8/72 + 312/72 + 423/72 = 743/72. 743 ÷ 72 = 10 23/72.

    DIF: Application
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42. What is one third of a piece of tape that is 18.6 cm long?
    a. 9.2 cm
    b. 3.1 cm
    c. 6.2 cm
    d. 55.8 cm

    ANS: C
    18.6 cm · 1/3 = 6.2 cm or 18.6 cm ÷ 3 = 6.2 cm.

    DIF: Application
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43. A bottle of medication contains 60 mL of medication. The physician asks that the patient receive 1/12 of the medication. How many milliliters should the patient receive? _____
    a. 6 mL
    b. 5 mL
    c. 12 mL
    d. 1 mL

    ANS: B
    1/12 (60 mL) = 5 mL.

    DIF: Application
    OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.

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44. Reduce the following fraction:
45/90 = _____.
a. 1/2
b. 3/4
c. 5/8
d. 2/5

ANS: A
Divide the numerator and denominator by 45.

DIF: Application
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45. Reduce the following fraction:
46/100 = _____.
a. 23/50
b. 7/5
c. 3/25
d. 1/2

ANS: A
Divide the numerator and denominator by 2.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
MSC: PTCB Blueprint: 4.2 Formulas, calculations, ratios, proportions, alligations, conversions, Sig codes (e.g., b.i.d., t.i.d., Roman numerals), abbreviations, medical terminology, and symbols for days supply, quantity, dose, concentration, dilutions

46. Reduce the following fraction:
5/30 = _____.
a. 1/5
b. 3/4
c. 1/6
d. 2/15

ANS: C
Divide the numerator and denominator by 5.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
MSC: PTCB Blueprint: 4.2 Formulas, calculations, ratios, proportions, alligations, conversions, Sig codes (e.g., b.i.d., t.i.d., Roman numerals), abbreviations, medical terminology, and symbols for days

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supply, quantity, dose, concentration, dilutions

47. Reduce the following fraction:
76/120 = _____.
a. 11/40
b. 19/30
c. 3/60
d. 7/15

ANS: B
Divide the numerator and denominator by 4.

DIF: Application
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48. Change the following improper fraction to a mixed number:
65/35 = _____.
a. 1/2
b. 2 3/4
c. 1 6/7
d. 1 3/5

ANS: C
65 ÷ 35 = 1 30/35, which reduces to 1 6/7.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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49. Change the following improper fraction to a mixed number:
60/15 = _____.
a. 4
b. 3
c. 7
d. 5

ANS: A
60 ÷ 15 = 4.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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50. Change the following improper fraction to a mixed number:
120/25 = _____.
a. 4 2/3
b. 5 3/5
c. 3 1/2
d. 4 4/5

ANS: D
120 ÷ 25 = 4 20/25, which reduces to 4 4/5.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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51. Change the following improper fraction to a mixed number:
250/75 = _____.
a. 3 1/3
b. 3 2/5
c. 4 1/2
d. 2 1/3

ANS: A
250 ÷ 75 = 3 25/75, which reduces to 3 1/3.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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52. Change the following mixed numbers to improper fractions:
5 15/16 = _____.
a. 23/4
b. 84/16
c. 95/16
d. 124/16

ANS: C
16 × 5 = 80 + 15 = 95/16.

DIF: Application
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53. Change the following mixed numbers to improper fractions:

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5 3/4 = _____.
a. 53/4
b. 15/4
c. 23/4
d. 1/2

ANS: C
4 × 5 = 20 + 3 = 23/4.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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54. Change the following mixed numbers to improper fractions:
8 1/6 = _____.
a. 49/6
b. 17/9
c. 23/5
d. 9/6

ANS: A
6 × 8 = 48 + 1 = 49/6.

DIF: Application
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55. Change the following mixed numbers to improper fractions:
97 1/10 = _____.
a. 65/10
b. 970/10
c. 971/10
d. 98/10

ANS: C
10 × 97 = 970 + 1 = 971/10.

DIF: Application
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56. Convert the following fraction to a decimal:
1/2 = _____.

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a. 0.5
b. 1.5
c. 0.25
d. 0.333

ANS: A
1 ÷ 2 = 0.5.

DIF: Application
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57. Convert the following fractions to decimals:
2/3 = _____.
a. 0.25
b. 0.67
c. 0.5
d. 0.33

ANS: B
2 ÷ 3 = 0.6666…, which rounds to 0.67.

DIF: Application
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58. Convert the following fractions to decimals:
3/4 = _____.
a. 0.25
b. 0.45
c. 0.75
d. 0.5

ANS: C
3 ÷ 4 = 0.75.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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59. Convert the following fractions to decimals:
1 1/2 = _____.
a. 1.75
b. 1.25

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c. 1.33
d. 1.5

ANS: D
1 + 1 ÷ 2 = 1.5.

DIF: Application
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60. Convert the following fractions to decimals:
1/10 = _____.
a. 0.1
b. 0.8
c. 10.1
d. 0.01

ANS: A
1 ÷ 10 = 0.1.

DIF: Application
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61. Convert the following decimal to a fraction and reduce:
0.48 = _____.
a. 12/48
b. 1/2
c. 12/25
d. 1/5

ANS: C
48/100 divided by 4/4 reduces to 12/25.

DIF: Application
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62. Convert the following decimal to a fraction and reduce:
0.01 = _____.
a. 1/100
b. 1/10
c. 1/46
d. 2/200

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ANS: A
1 ÷ 100 = 0.01.

DIF: Application
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63. Convert the following decimal to a fraction and reduce:
0.68 = _____.
a. 1/5
b. 17/25
c. 13/25
d. 2/3

ANS: B
68/100 divided by 4/4 equals 17/25.

DIF: Application
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64. Convert the following decimal to a fraction and reduce:
0.2 = _____.
a. 1/5
b. 1/3
c. 2/20
d. 2/3

ANS: A
2/10 divided by 2/2 = 1/5.

DIF: Application
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65. Convert the following fraction to a percent.
1/6 = _____%
a. 16.67
b. 33.32
c. 26.12
d. 19.12

ANS: A

1 divided by 6 times 100 rounds to 16.67% or
1/6 = *x*/100.

DIF: Application
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66. Convert the following fraction to a percent.
3/8 = _____%
a. 32.9
b. 37.5
c. 23.4
d. 42.1

ANS: B
3 ÷ 8 = 0.375 · 100 = 37.5% or 3/8 = *x*/100.

DIF: Application
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67. Convert the following fraction to a percent.
1/3 = _____%
a. 66.6
b. 33.3
c. 25.0
d. 73.5

ANS: B
1 divided by 3 times 100 rounds to 33.3%.

DIF: Application
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68. Convert the following fraction to a percent.
7/10 = _____%
a. 35
b. 23
c. 7
d. 70

ANS: D
7/10 = *x*/100.

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$x = 70$
70/100 = 70%.

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69. Convert the following fraction to a percent.
4 3/5 = _____%
a. 460
b. 333
c. 125
d. 75

ANS: A
(4 × 100 = 400 %) + (3 ÷ 5 × 100 = 60%); 400% +60% = 460%.

DIF: Application
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70. Convert the following fraction to a percent.
7 1/9 = _____%
a. 711.1
b. 77.9
c. 23.1
d. 625.8

ANS: A
(7 × 100 = 700%) + (1 ÷ 9 × 100 rounds to 11.1%); 700% + 11.1% = 711.1%.

DIF: Application
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71. Convert the following fraction to a percent.
2/3 = _____%
a. 53
b. 67
c. 83
d. 75

ANS: B

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2 divided by 3 times 100 rounds to 67%.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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72. Convert the following fraction to a percent.
11/15 = _____%
a. 21.5
b. 67.32
c. 44.8
d. 73.33

ANS: D
11 divided by 15 times 100 rounds to 73.33%.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
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73. Convert the following fraction to a percent.
3/5 = _____%
a. 60
b. 24
c. 35
d. 78

ANS: A
3 divided by 5 times 100 equals 60% or 3/5 = x/100.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.
MSC: PTCB Blueprint: 4.2 Formulas, calculations, ratios, proportions, alligations, conversions, Sig codes (e.g., b.i.d., t.i.d., Roman numerals), abbreviations, medical terminology, and symbols for days supply, quantity, dose, concentration, dilutions

74. Convert the following percent to a fraction.
2/3% = _____.
a. 1/150
b. 4/17
c. 1/25
d. 2/3

ANS: A
(2/3)/100 is 2/3 ÷ 100. Invert and multiply 2/3 × 1/100 = 2/300 = 1/150.

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DIF: Application
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75. Convert the following percent to a fraction.
0.88% = _____.
a. 11/1250
b. 2/1577
c. 1/47
d. 5/333

ANS: A
0.88/100 × 100/100 = 88/10,000 ÷ 8/8 = 11/1,250.

DIF: Application
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76. Convert the following percent to a fraction.
4 1/4% = _____.
a. 12/17
b. 25/674
c. 17/400
d. 3/5

ANS: C
(17/4)/100 = 17/4 × 1/100 = 17/400.

DIF: Application
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77. Convert the following percent to a fraction.
0.55% = _____.
a. 2/537
b. 5/17
c. 11/2000
d. 21/3277

ANS: C
0.55/100 × 100/100 = 55/10,000 ÷ 5/5 = 11/2,000.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of

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pharmacy technicians in a variety of settings.
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78. Convert the following percent to a fraction.
253% = _____.
a. 2 26/100
b. 1/57
c. 2 4/15
d. 2 53/100

ANS: D
253/100 = 2 53/100.

DIF: Application
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79. Convert the following percent to a fraction.
0.01% = _____.
a. 1/100
b. 1/10
c. 1/10,000
d. 1/1000

ANS: C
0.01/100 × 100/100 = 1/10,000.

DIF: Application
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80. Convert the following percent to a decimal.
0.075% = _____.
a. 0.075
b. 0.00075
c. 75
d. 0.75

ANS: B
0.075/100 × 1,000/1,000 = 75/10,000 = 0.00075
or 0.075 ÷ 100 = 0.00075.

DIF: Application
OBJ: ASHP Objective: 2.6 (Applying) Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of settings.

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81. Convert the following percent to a decimal.
0.034% = _____.
a. 0.0034
b. 0.00034
c. 34
d. 3.4

ANS: B
0.034 ÷ 100 = 0.00034.

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82. Convert the following percent to a decimal.
1.67% = _____.
a. 1.67
b. 0.00167
c. 0.167
d. 0.0167

ANS: D
1.67 ÷ 100 = 0.0167.

DIF: Application
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83. Convert the following decimal to a percent.
0.5 = _____.
a. 500%
b. 5%
c. 0.5%
d. 50%

ANS: D
0.5 × 100 = 50%.

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supply, quantity, dose, concentration, dilutions

84. Convert the following decimal to a percent.
0.93 = _____.
a. 93%
b. 9.3%
c. 0.93%
d. 930%

ANS: A
0.93 × 100 = 93%.

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85. Convert the following decimal to a percent.
1.5 = _____.
a. .150%
b. 1.5%
c. 15%
d. 150%

ANS: D
1.5 × 100 = 150%.

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86. Convert the following decimal to a percent.
0.01 = _____.
a. 1%
b. 10%
c. 0.01%
d. 100%

ANS: A
0.01 × 100 = 1%.

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87. Solve the following ratio and proportion.
gr 1/4:gr 1/8::gr 1:*x*
a. *x* = gr 1/8
b. *x* = gr 5/3
c. *x* = gr 2/3
d. *x* = gr 1/2

ANS: D
1/8 × 1 ÷ 1/4 = 1/8 × 4/1 = 4/8 = 1/2.

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88. Solve the following ratio and proportion.
25 mg:*x*::50 mg:1 tab
a. *x* = 3/5 tab
b. *x* = 1/2 tab
c. *x* = 1 tab
d. *x* = 1 1/2 tab

ANS: B
25 × 1 ÷ 50 = 1/2.

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89. Solve the following ratio and proportion.
30:45::5:*x*
a. *x* = 7.5
b. *x* = 17.5
c. *x* = 5.7
d. *x* = 25

ANS: A
45 × 5 ÷ 30 = 7.5.

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90. Solve the following ratio and proportion.

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25/200 = *x*/40
a. $x = 10$
b. $x = 5$
c. $x = 15$
d. $x = 1$

ANS: B
$200x = 1{,}000$
$x = 1{,}000 \div 200 = 5$.

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91. Solve the following ratio and proportion.
2.5/7.5 = *x*/12
a. $x = 3.5$
b. $x = 4$
c. $x = 2.5$
d. $x = 1$

ANS: B
$2.5 \times 12 = 30$
$30 \div 7.5 = 4$.

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92. Solve the following ratio and proportion.
\$2/30 tabs = *x*/45 tabs
a. $x = \$12$
b. $x = \$2$
c. $x = \$3$
d. $x = \$5$

ANS: C
$2 \times 45 = 90$
$90 \div 30 = 3$.

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93. Solve the following ratio and proportion.
15/75 = 100/x
a. $x = 35$
b. $x = 173$
c. $x = 500$
d. $x = 250$

ANS: C
75 × 100 = 7,500
7,500 ÷ 15 = 500.

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94. Solve the following ratio and proportion.
4/160 = x/100
a. $x = 12.5$
b. $x = 2.5$
c. $x = 2$
d. $x = 5.2$

ANS: B
4 × 100 = 400
400 ÷ 160 = 2.5.

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95. Solve the following ratio and proportion.
A patient has 10 mg scored (dividable) tablets and needs to take 25 mg per dose. How many tablets does she need for one dose?
a. 1 tablet
b. 2 1/2 tablets
c. 1 1/2 tablets
d. 3 1/2 tablets

ANS: B
10 mg/1 tab = 25 mg/x
10x = 25
x = 2.5 or 2 1/2.

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