Chapter 6 Practice Test 238 Question 1

Answer: **D**

$4 \times \frac{1}{3} = \frac{4}{3} = 1\frac{1}{3}$

Chapter 6 Practice Test 238 Question 2

Answer: **C**

$\frac{4}{5} \div \frac{2}{3} = \frac{4}{5} \times \frac{3}{2}$

Chapter 6 Practice Test 238 Question 3

Answer: **B**

The reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$.

$1 \div \frac{2}{3} = 1 \times \frac{3}{2} = \frac{3}{2}$

Chapter 6 Practice Test 238 Question 4

Answer: **C**

$\frac{1}{2} \times (\frac{4}{3} - \frac{1}{6}) + \frac{3}{4}$ Brackets.

$= \frac{1}{2} \times (\frac{8}{6} - \frac{1}{6}) + \frac{3}{4}$

$= \frac{1}{2} \times \frac{7}{6} + \frac{3}{4}$ Multiply.

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

$= \frac{7}{12} + \frac{9}{12}$

$= \frac{16}{12}$

$= 1\frac{1}{3}$

Chapter 6 Practice Test 238 Question 5

Answer: **A**

$$\frac{3}{4} \div \frac{5}{12}$$
$$= \frac{3}{4} \times \frac{12}{5}$$
$$= \frac{36}{20}$$
$$= \frac{9}{5}$$

Chapter 6 Practice Test 238 Question 6

The product of a fraction and its reciprocal is 1. Example: $\frac{3}{4} \times \frac{4}{3} = \frac{12}{12} = 1$.

Chapter 6 Practice Test 238 Question 7

$$2\frac{2}{3} \div 4\frac{2}{3}$$
$$= \frac{8}{3} \div \frac{14}{3}$$
$$= \frac{8}{3} \times \frac{3}{14}$$
$$= \frac{24}{42}$$
$$= \frac{4}{7}$$

Chapter 6 Practice Test 238 Question 8

$$2\frac{1}{4} \times 1\frac{1}{3}$$
$$= \frac{9}{4} \times \frac{4}{3}$$
$$= \frac{36}{12}$$
$$= 3$$

Chapter 6 Practice Test 238 Question 9

a) $\frac{3}{8} \times \frac{5}{6} = \frac{15}{48} = \frac{5}{16}$

b) $\frac{6}{5} \div \frac{7}{10} = \frac{6}{5} \times \frac{10}{7} = \frac{60}{35} = \frac{12}{7} = 1\frac{5}{7}$

c) $3\frac{3}{5} \times \frac{3}{8} = \frac{18}{5} \times \frac{3}{8} = \frac{54}{40} = \frac{27}{20} = 1\frac{7}{20}$

d) $\frac{9}{10} \div 2\frac{1}{2} = \frac{9}{10} \div \frac{5}{2} = \frac{9}{10} \times \frac{2}{5} = \frac{18}{50} = \frac{9}{25}$

e) $(1\frac{1}{4} + \frac{3}{4}) \div 1\frac{1}{2} - 1\frac{1}{3}$ Brackets.

$= (\frac{5}{4} + \frac{3}{4}) \div 1\frac{1}{2} - 1\frac{1}{3}$

$= \frac{8}{4} \div 1\frac{1}{2} - 1\frac{1}{3}$ Divide.

$= \frac{8}{4} \div \frac{3}{2} - 1\frac{1}{3}$

$= \frac{8}{4} \times \frac{2}{3} - 1\frac{1}{3}$

$= \frac{16}{12} - 1\frac{1}{3}$ Subtract.

$= \frac{16}{12} - \frac{4}{3}$

$= \frac{16}{12} - \frac{16}{12}$

$= 0$

Chapter 6 Practice Test 238 Question 10

To determine how much Leisha earned, multiply \$14 by $6\frac{1}{2}$:

$14 \times 6\frac{1}{2} = 14 \times \frac{13}{2} = \frac{182}{2} = 91.$

Leisha earned \$91.

Chapter 6 Practice Test 238 Question 11

a) To determine what fraction of a box Chad eats per day, divide $\frac{3}{4}$ by 7:

$\frac{3}{4} \div \frac{7}{1} = \frac{3}{4} \times \frac{1}{7} = \frac{3}{28}$. Chad eats $\frac{3}{28}$ of a box of granola per day.

b) To determine how many boxes of granola Chad eats per year, multiply 365 by $\frac{3}{28}$:

$365 \times \frac{3}{28} = \frac{1095}{28} = 39\frac{3}{28}$. Chad eats approximately 39 boxes of granola a year.

Chapter 6 Practice Test 238 Question 12

To determine how many bits equal 16 bytes, divide 16 by $\frac{1}{8}$:

$16 \div \frac{1}{8} = 16 \times 8 = 128$. There are 128 bits in 16 bytes.

Chapter 6 Practice Test 238 Question 13

To determine how many sheets are used, multiply 500 by $1\frac{3}{4}$:

$500 \times 1\frac{3}{4} = 500 \times \frac{7}{4} = \frac{3500}{4} = 875$. The number of sheets used is 875.

Chapter 6 Practice Test 239 Question 14

To determine how long it will take Lianne to save enough money for the DVD player, subtract $\frac{3}{4}$ from 1, and then divide $2\frac{1}{2}$ by this difference:

$2\frac{1}{2} \div (1 - \frac{3}{4})$ Brackets.

$= 2\frac{1}{2} \div (\frac{4}{4} - \frac{3}{4})$

$= 2\frac{1}{2} \div \frac{1}{4}$ Divide.

$= \frac{5}{2} \times \frac{4}{1}$

$= \frac{20}{2}$ or 10

It will take Lianne 10 weeks to save enough money for the DVD player.

Chapter 6 Practice Test 239 Question 15

a) To determine how many carousels turn counterclockwise, multiply 100 by $\frac{9}{20}$:

$100 \times \frac{9}{20} = \frac{900}{20} = 45$. Forty-five carousels out of 100 turn counterclockwise.

b) To determine how many carousels turn either way, do the following computation:

$100 \times \left[1-\left(\frac{9}{20}+\frac{3}{10}\right)\right]$ Brackets.

$= 100 \times \left[1-\left(\frac{9}{20}+\frac{6}{20}\right)\right]$

$= 100 \times \left[1-\frac{15}{20}\right]$ Brackets.

$= 100 \times \left[\frac{20}{20}-\frac{15}{20}\right]$

$= 100 \times \frac{5}{20}$ Multiply.

$= \frac{500}{20}$ or 25

Twenty-five out of 100 carousels turn either way.

c) To determine how many times the number of carousels that always turn counterclockwise is of the number of carousels that always turn clockwise, divide $\frac{9}{20}$ by $\frac{3}{10}$:

$\frac{9}{20} \div \frac{3}{10}$

$= \frac{9}{20} \times \frac{10}{3}$

$= \frac{90}{60}$

$= 1\frac{30}{60}$ or $1\frac{1}{2}$

The number of carousels that always turn counterclockwise is $1\frac{1}{2}$ times the number of carousels that always turn clockwise.

d) To determine the number of carousels that were included in the survey, divide 75 by $\frac{3}{10}$:

$$75 \div \frac{3}{10}$$
$$= 75 \times \frac{10}{3}$$
$$= \frac{750}{3}$$
$$= 250$$

There were 250 carousels included in the survey.