REVIEW MATERIEL

GRADE 7 and 8 (ish)

If none of this looks familiar then Grade 10 will be a considerable challenge!

If fractions are not familiar you can use a calculator. But it limits career fields

If Multiplying and dividing is not familiar then use a calculator, but career fields are limited, and quizzes will take twice as long!

+	1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10	11
2	3	4	5	6	7	8	9	10	11	12
3	4	5	6	7	8	9	10	11	12	13
4	5	6	7	8	9	10	11	12	13	14
5	6	7	8	9	10	11	12	13	14	15
6	7	8	9	10	11	12	13	14	15	16
7	8	9	10	11	12	13	14	15	16	17
8	9	10	11	12	13	14	15	16	17	18
9	10	11	12	13	14	15	16	17	18	19
10	11	12	13	14	15	16	17	18	19	20

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

FRACTIONS

Proper Fractions. Means the numerator is less than the denominator. **Ex:** 1/6

Improper Fraction. Means the numerator is *more* than the denominator. **Ex:** 3/2 (three halves of a pizza)

Mixed fraction (carpenter's fractions). Use whole numbers mixed with a proper fraction. *Ex:* one pizza and another half pizza *or* one and a half pizzas, *or* 1½ pizzas.

Adding and Subtracting Fractions. Must have the same denominator. Find a **LCM** of the denominators (also called a **Lowest Common Denominator**) and make equivalent fractions of the same denominator.

Ex1: $\frac{1}{2}+\frac{1}{4}=\frac{2}{4}+\frac{1}{4}=\frac{3}{4}$ **Ex2:** $\frac{1}{3}+\frac{2}{7}=\frac{7}{21}+\frac{6}{21}=\frac{13}{21}$

Multiplying Fractions. Multiply numerators together for new numerator, multiply denominators together for new denominator.

Ex1: $\frac{1}{2}*\frac{3}{4}=\frac{1*3}{2*4}=\frac{3}{8}$ One half of three-quarters of a pizza is three-eighths of a pizza

Reciprocals. The reciprocal of a number means that number divided into one, '*flipped*'. If seven people share 1 one thing, they each get $1/7^{th}$ of the thing. A number multiplied by its reciprocal is just one. $7*\frac{1}{7}=\frac{7}{1}*\frac{1}{7}=\frac{7}{7}=1$

Dividing By Fractions. Just *multiply* by a reciprocal. $\frac{\left(\frac{1}{3}\right)}{\left(\frac{2}{3}\right)}=\frac{1}{3}\div\frac{2}{3}=\frac{1}{3}*\frac{3}{2}=\frac{3}{6}=\frac{1}{2}$

Fractions to Decimals. Just convert to 10^{ths} or 100^{ths} or $1,000^{ths}$ using ratios or just use a calculator or else use long division.

Ex1: $\frac{3}{5}=\frac{6}{10}=10\overline{)6}^{\,0.6}=0.6$ **Ex2:** $\frac{1}{8}=\frac{125}{1000}=0.125$

Decimals to Fractions.

Ex: 0.25 'means' 25/100ths and then reduce to lowest terms: $\frac{25}{100}=\frac{5}{20}=\frac{1}{4}$

Percent (%). Just French for '*per hundred*'. **65%** means 65/100, *that is all.*

Percent to decimal: divide by 100, *or* move decimal point 2 places left.

Ex1: $75\%\equiv\frac{75}{100}=0.75$ **Ex2:** 2.35% **means** 0.0235

Decimal to Percent. Multiply by 100%, *or* move decimal point two places right.

Ex1: 0.025 *100% = 2.5%   **Ex2:** 0.625*100%=62.5%

Common Multiples and LCM

4:	4	8	12	16	20	24	....
6:	6	12	18	24	30	36	....

The LCM of **4** and **6** is **12.**

Reduce fraction to lowest terms **means to make the numerator and denominator as low as possible without changing their proportion. Just keep dividing top and bottom by prime numbers.**

Ex: 1: $\frac{12}{16}=\frac{6}{8}=\frac{3}{4}$

Ex 2: $\frac{30}{60}=\frac{15}{30}=\frac{5}{10}=\frac{1}{2}$

Divide top / bottom by 2, then 3, then 5. The GCF is 2*3*5 is 30

Number	Reciprocal
6	1/6
21	1/21
7	1/7

Dividing something by one half means really multiplying the something by two! Dividing by one third same as multiply by 3

$\frac{3}{5}=3\div5=5\overline{)3.0}^{\,0.6}$

A good calculator will actually do the conversion for you if you are desperate.

Percent %	Decimal	Fraction
37.5%	0.375	3/8
50	0.5	1/2
2.5%	0.025	1/40
100%	1.0	1

METRIC SYSTEM AND CONVERSION

Mega [M]	Millions of…
Kilo [k]	Thousand of..
Deca [d]	Tens of…
Centi [c]	Hundred*ths* of..
Milli [m]	Thousand*ths* of…

METRIC LENGTH or MASS or VOLUME			
km or kg or kL	m or g or L	cm or cg or cL	mm or mg or mL
0.001	1	100	1,000
0.002	2	200	2,000
0.01	10	1,000	10,000
1	1,000	100,000	1,000,000
5	5,000	500,000	$5*10^6$
10	10,000	$1*10^6$	$1*10^7$

Examples:

1,000 mm = 1 L

200 mm = 20 cm

35 mm = 3.5 cm

5.2 g = 5,200 mg

4500 L = 4.5 kL

523 g = 0.523 kg

1,234 m = 1.234 km

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AREA AND VOLUME

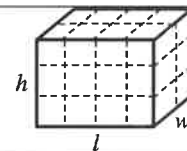|	Area of rectangle or square	Volume of an rectangular prism or cube
Area: the amount of surface that is covered. Square units; unit^2. **Volume**: the amount of capacity of a 3D object to hold stuff. Cubic units; unit^3. **Prism**: two identical flat surfaces connected together along their edges by rectangles.	$Area = l * w$ Area = 4 cm* 3cm Area = 12 cm^2	Volume=l*w*h Volume = 4 cm*2cm*3cm Area = 24 cm^3
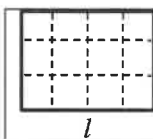
Time. 60 second = 1 min; 60 min = 1 hr. **Ex1**: 320 min = 5 hr 20 min. **Ex2**: 126 sec = 2 min 6 sec.

Probability and Statistics

$$probability = \frac{\# \ of \ favourable \ outcomes}{\# \ of \ all \ possible \ outcomes}$$

$$prob(R) = \frac{3}{8} = 0.375 = 37.5\%$$

$$prob(Y) = \frac{2}{8} = \frac{1}{4} = 0.25 = 25\%$$

Mean. Type of average or central representative number; if we all pooled our stuff and shared evenly. $mean = \frac{sum \ of \ all \ the \ \#s}{number \ of \ \# s}$.

Ex: Mean of 3, 5, 10, 12. $mean \equiv \bar{x} = \frac{30}{4} = 7.5$

Median. The centre value when the data is in increasing order. If two middle numbers, the mean of those.

Median. The centre value when the data is arranged in increasing order. If two middle numbers, the *mean* of those.
Ex: 1, 2, 3, 9, 20. The median value is 3. (the *mean* is 7)
Ex: 1, 2, 3, 9, 20, 31. The median is $\frac{3+9}{2} = 6$ (the *mean* is 11)

Mode. The value that is the most frequent.
 Ex: 1, 5, 8, 7, 3, 7, 8, 2, 8. The **mode** is 8; it happens times.
Range: How spread out the data is. The difference between the largest value and smallest value.
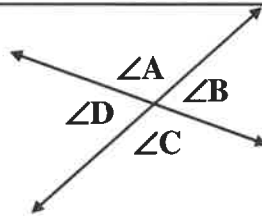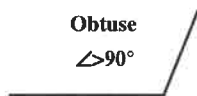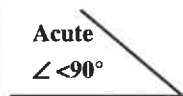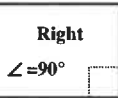 Ex: 15, 5, 8, 9, 3, 7, 8, 3, 8. The **range** is 15 − 3 = 12.

GEOMETRY

Right angle: 90°.
Acute: less than 90°.
Obtuse : more than 90°.

Right $\angle = 90°$

Acute $\angle < 90°$

Obtuse $\angle > 90°$

For the any two intersecting lines:
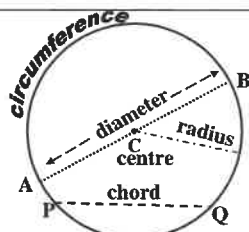$\angle$A is *opposite* $\angle$C; they are equal.
$\angle$B is *opposite* $\angle$D; they are equal.
$\angle$A is *supplementary to* $\angle$D. They add to 180°. $\angle$A is *supplementary to* $\angle$B. They add to 180°.
Etc....

Circle Circumference formula
Circumference = π * diameter
 ≈ 3.14 * d
 or
Circumference = 2*π * radius
 ≈ 6.28 * r
π = **3.14159265358979323**....(accurate)

Solid Figures
Cube: six square faces
Rectangular Prism: six rectangular faces.
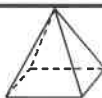**Prism**: Two faces joined by rectangles
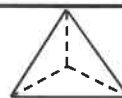**Pyramid**. Faces with edges connected to a point above face.

Rectangular Prism	Triangular Prism	Square Pyramid	Triangular Pyramid	Cylinder

ALGEBRA

Properties of Numbers and Operations. a * b = b * a [commutative for multiplication] a + b = b + a [commutative for addition]
(a * b) * c = a * (b * c) [associative for mult.]   **(a + b) + c = a + (b + c)** [associative for add.]
Identity for Adding or Multiplying: a + 0 = a   a * 1 = a   **Zero Properties**: a * 0 = 0   0 ÷ a = 0.
Distributive property: a * (b + c) = a * b + a * c.   **Ex1**: 3*(□ + ☺) = 3*□ + 3*☺ **Ex2**: 2(3+4) = 2*3 + 2*4 = 14

Evaluating expressions using *order of operations* BEDMAS [Brackets, Exponents, ÷, ×, +, −]   Ex: 4 + 3 * 2 = 10.

Solving Equations using subtraction or adding. Just undo what is done to variable!
Ex1: x + 8 = 12. Subtract 8 from both sides; x = 12 − 8; x = 4.   *Ex2*: x − 5 = 4. Add 5 to both sides; x = 4 + 5; x = 9.
Solving Equations using Multiplying or Dividing. Just undo what is done to variable!
Ex1: x ÷ 8 = 3. Multiply both sides by 8; x = 3 * 8; x = 24.   *Ex2*: x * 5 = 40. Divide both sides by 5; x = 40÷ 5; x = 8.

Integer Numbers. They include *negative numbers*, numbers below zero, (0 − 5), ie: *5 below zero* or simply ⁻5, or 5 that you don't have or you owe someone, a debit! Subtracting a negative is adding! Ex: 6 − (⁻5) = 6 + 5 so it is **11**.

Basic Operations with Integers (by example). −3 + (−3) + (−4) = −10;   (−5) * 4 = −20; (−3) * (−4) = 12; etc.
Adding two #s of same sign→*keep same sign*. **Subtraction of two #s different signs**→keep sign of number furthest from zero.
Multiply or divide two #s of same sign→positive sign. **Multiply or divide two #s of different sign**→negative sign.

Exponents. Just lazy multiplying but quicker. Ex: 2*2*2*2*2*2 is seven twos multiplied together. Easier just to show it as '2^7'. a^m is called a power. 'a' is the base, 'm' is the exponent. To *square* a number means an exponent of 2; to *cube*, an exponent of 3.
4^2 = 4 * 4 = 16;   5^3 = 5 * 5 * 5 = 125. *Buttons* on your calculator: ^ or y^x and   x^2 depending on *your* calculator

FINAL TEST Chapters 1-13

Complete.

	a	b	c	d	e
1.	$\begin{array}{r} 25426 \\ 56453 \\ +22441 \end{array}$	$\begin{array}{r} 620 \\ 276 \\ +257 \end{array}$	$\begin{array}{r} 980 \\ -597 \end{array}$	$\begin{array}{r} 94020 \\ -24873 \end{array}$	$\begin{array}{r} 465 \\ \times 49 \end{array}$

| **2.** | $\begin{array}{r} 5404 \\ \times 936 \end{array}$ | $8\overline{)9352}$ | $29\overline{)25\,313}$ | $\begin{array}{r} \$1.69 \\ +9.36 \end{array}$ | $\begin{array}{r} \$137.89 \\ -119.99 \end{array}$ |

| **3.** | $\begin{array}{r} 0.218 \\ \times 1.8 \end{array}$ | $\begin{array}{r} 94.03 \\ \times 7.04 \end{array}$ | $8\overline{)1.608}$ | $0.06\overline{)19.2}$ | $0.45\overline{)0.684}$ |

	a	b	c	d
4.	$\dfrac{3}{5} \times \dfrac{7}{9}$	$4\dfrac{3}{8} \times 1\dfrac{3}{5}$	$\dfrac{6}{7} \div \dfrac{2}{3}$	$7\dfrac{1}{2} \div 3\dfrac{3}{4}$

| **5.** | $\begin{array}{r} \dfrac{2}{5} \\ +\dfrac{6}{7} \end{array}$ | $\begin{array}{r} 7\dfrac{1}{2} \\ +1\dfrac{2}{3} \end{array}$ | $\begin{array}{r} \dfrac{9}{10} \\ -\dfrac{2}{3} \end{array}$ | $\begin{array}{r} 6\dfrac{1}{4} \\ -3\dfrac{7}{8} \end{array}$ |

Solve each of the following.

	a	b	c	d
6.	$\dfrac{n}{3} = \dfrac{4}{6}$	$\dfrac{9}{n} = \dfrac{27}{81}$	$\dfrac{7}{9} = \dfrac{70}{n}$	$\dfrac{8}{24} = \dfrac{n}{18}$
7.	$\dfrac{18}{25} = \dfrac{90}{n}$	$\dfrac{8}{10} = \dfrac{n}{100}$	$\dfrac{9}{n} = \dfrac{75}{100}$	$\dfrac{n}{150} = \dfrac{6}{100}$

GO

Complete. Write each fraction in simplest terms.

a

	Percent	Fraction	Decimal
8.	18%		
9.		$\frac{1}{4}$	
10.			0.07

b

	Percent	Fraction	Decimal
	6%		
		$\frac{1}{20}$	
			1.1

Complete the following.

	a	*b*	*c*
11.	_____ is 40% of 80.	25 is _____ % of 50.	_____ is 100% of 2.75.
12.	20 is 10% of _____.	18 is _____ % of 180.	300 is 5% of _____.
13.	2.2 is _____ % of 8.	_____ is 7.3% of 50.	63 is 90% of _____.
14.	72 is _____ % of 80.	32 is 4% of _____.	_____ is $1\frac{1}{2}$% of 30.

				a	*b*
	Principal	Interest rate	Time	Interest	Total amount
15.	$800	8%	1 year		
16.	$1000	$10\frac{1}{2}$%	2 years		
17.	$780	12%	$3\frac{1}{4}$ years		
18.	$900	$7\frac{1}{2}$%	180 days		

	a	*b*	*c*
19.	190 km = _____ m	3700 mm = _____ cm	5.5 kL = _____ L
20.	80 mm = _____ cm	8 L = _____ mL	1400 g = _____ kg
21.	28 kg = _____ g	$8\frac{1}{2}$ h = _____ min	75 L = _____ kL
22.	2 t = _____ kg	11 500 mL = _____ L	2400 cm = _____ m

GO

FINAL TEST Chapters 1–13 (continued)

Match each figure with its name. You will not use all the letters.

23. _____

24. _____

25. _____

26. _____

27. _____

28. _____

29. _____

30. _____

31. _____

32. _____
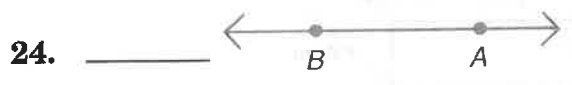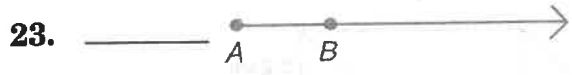
a. acute angle

b. acute triangle

c. isosceles triangle

d. line AB

e. line segment AB

f. obtuse angle

g. parallel lines

h. perpendicular lines

i. ray AB

j. ray BA

k. rectangle

l. rhombus

m. right triangle

n. square

Complete each of the following.
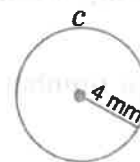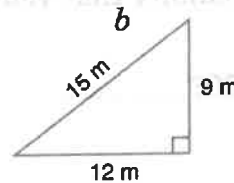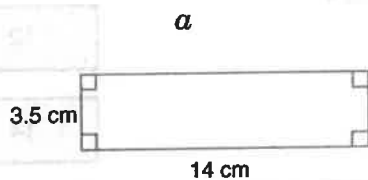
		a	*b*	*c*
33.	*Area*	_____ cm²	_____ m²	≈ _____ mm²
34.	*Perimeter / Circumference*	_____ cm	_____ m	≈ _____ mm

a — 3.5 cm, 14 cm

b — 15 m, 9 m, 12 m

c — 4 mm

Find the volume and surface area of each figure. Use 3.14 for π.

a	b

35.

9 m
10 m
16.5 m

2.2 cm
6 cm
8 cm

$V =$ _____ m^3

$SA =$ _____ m^2

$V =$ _____ cm^3
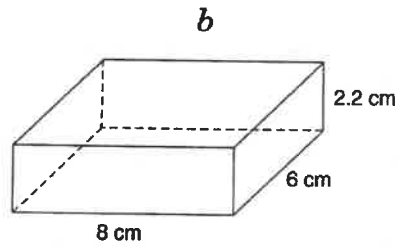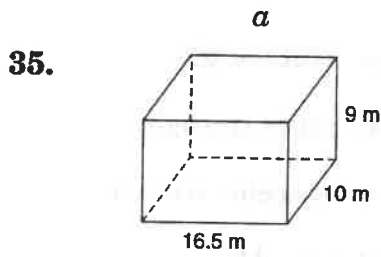
$SA =$ _____ cm^2

Find the mean, median, and mode of each set of numbers.

a	b

36. 38, 48, 44, 33, 29, 33, 48, 26, 53, 48   33.4, 39, 42.7, 43.6, 36.2, 33.4, 40.5

mean: _____

median: _____

mode: _____

mean: _____

median: _____

mode: _____

Create a stem-and-leaf plot with a key for each set of data.

37. 37, 58, 49, 46, 58, 50, 63, 76, 63, 67   183, 215, 223, 197, 204, 211, 188, 193

You are to choose one of the cards on the right without looking. What is the probability that you will draw

38. a number less than 20? _____

39. an even number? _____

40. a multiple of 10? _____

10	50
12	40
14	30
16	18

STOP

CHAPTER 1 CUMULATIVE REVIEW

Do each problem.
Find the correct answer.
Mark the space for the answer.

| Part 1 **Concepts** |

1. Which of the following has a 6 in the thousands place?

A 8726 + 13 650

B 18 321 + 17 874

C 3726 + 7941 + 8015

D 28 354 + 33 619

2. What digit is in the hundreds place in the difference 65 729 − 14 055?

A 1   C 6

B 4   D 7

3. How many digits are in the product 9176 × 843?

A 4   C 6

B 5   D 7

4. What is the remainder in the quotient

43)7618

A 16   C 9

B 7   D 23

5. What is 377 rounded to the nearest ten?

A 370   C 378

B 400   D 380

| Part 2 **Computation** |

6. 3128
     +579

A 3813

B 3707

C 2549

D 3714

7. 60 251
      8 969
    +34 187

A 104 297

B 103 476

C 103 407

D 102 803

8. 348
     −69

A 288

B 417

C 389

D 279

9. 48 092
    −39 475

A 8617

B 8599

C 87 567

D 9627

10. 82
      ×14

A 1048

B 1148

C 1275

D 1377

GO

ANSWER ROW   1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ   9 Ⓐ Ⓑ Ⓒ Ⓓ

             2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ   10 Ⓐ Ⓑ Ⓒ Ⓓ

11. 3024
    ×14

    A 15 120
    B 42 324
    C 42 336
    D 3038

12. 6)347

    A 57 r5
    B 53 r3
    C 59 r1
    D 60 r4

13. 36)11 098

    A 310 r31
    B 306 r25
    C 303 r4
    D 308 r10

Part 3 Applications

14. The new Winston Library received 2453 books on Tuesday, 1678 books on Wednesday, and 3241 books on Friday. How many books in all did the library receive those three days?

    A 7372   C 6339
    B 7512   D 6806

15. There were 364 boys and 289 girls that graduated from Glenforest High School last year. How many students graduated in all?

    A 627   C 653
    B 543   D 663

16. The Mary Marie fishing vessel brought in 5376 kg of fish last weekend. The Santa Anna brought in 4488 kg of fish the same weekend. How many more kilograms of fish did the Mary Marie bring in than the Santa Anna?

    A 798   C 888
    B 908   D 855

17. Jeremy's trip is 634 km. So far he has driven 395 km. How many more kilometres does he have to drive?

    A 192   C 267
    B 239   D 288

18. At the new Winston Library, they will have 94 shelving units. Each unit can hold 460 books. How many books will the library workers be able to shelve?

    A 43 240   C 38 456
    B 45 294   D 48 330

19. If Janice jumps rope for 28 min each day for 6 days, how many minutes will she have jumped rope?

    A 108   C 146
    B 192   D 168

20. The Anderson family picked 1120 apples on Saturday. If each basket held 35 apples, how many baskets did they use?

    A 30   C 28
    B 36   D 32

STOP

ANSWER ROW **11** Ⓐ Ⓑ Ⓒ Ⓓ   **13** Ⓐ Ⓑ Ⓒ Ⓓ   **15** Ⓐ Ⓑ Ⓒ Ⓓ   **17** Ⓐ Ⓑ Ⓒ Ⓓ   **19** Ⓐ Ⓑ Ⓒ Ⓓ
            12 Ⓐ Ⓑ Ⓒ Ⓓ   **14** Ⓐ Ⓑ Ⓒ Ⓓ   **16** Ⓐ Ⓑ Ⓒ Ⓓ   **18** Ⓐ Ⓑ Ⓒ Ⓓ   **20** Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. Which of the following quotients is the greatest?

A $32\overline{)1497}$

B $18\overline{)964}$

C $75\overline{)6942}$

D $37\overline{)5417}$

2. What number is in the numerator in the simplest form of the product $\frac{4}{9} \times \frac{3}{7}$?

A 3   C 12

B 4   D 21

3. How can you rename the addends to find the sum of $\frac{8}{11}$ and $\frac{3}{5}$?

A $\frac{13}{16}$ and $\frac{14}{16}$ C $\frac{40}{55}$ and $\frac{33}{55}$

B $\frac{8}{11}$ and $\frac{10}{11}$ D $\frac{16}{22}$ and $\frac{12}{22}$

4. $9\frac{7}{12}$ is the same as

A $\frac{115}{12}$ C $\frac{147}{12}$

B $9\frac{1}{2}$ D $\frac{75}{12}$

Part 2 Computations

5.
$$\begin{array}{r} 86\ 901 \\ 352 \\ \times 1\ 674 \\ \hline \end{array}$$

A 88 927
B 86 843
C 89 567
D 87 827

6. $64\overline{)37\ 098}$

A 581 r7
B 572 r19
C 579 r42
D 586 r57

7. $\frac{2}{3} \times \frac{6}{7}$

A $\frac{6}{7}$

B $\frac{4}{7}$

C $\frac{4}{21}$

D $\frac{2}{7}$

8. $\frac{1}{3} \times 2\frac{3}{5} \times 4\frac{3}{4}$

A $4\frac{7}{60}$

B $8\frac{3}{5}$

C $4\frac{3}{20}$

D $5\frac{11}{60}$

GO ▶

CUMULATIVE REVIEW

ANSWER ROW **1** Ⓐ Ⓑ Ⓒ Ⓓ   **3** Ⓐ Ⓑ Ⓒ Ⓓ   **5** Ⓐ Ⓑ Ⓒ Ⓓ   **7** Ⓐ Ⓑ Ⓒ Ⓓ
                2 Ⓐ Ⓑ Ⓒ Ⓓ   **4** Ⓐ Ⓑ Ⓒ Ⓓ   **6** Ⓐ Ⓑ Ⓒ Ⓓ   **8** Ⓐ Ⓑ Ⓒ Ⓓ

9. $2\frac{4}{9} \div 2\frac{3}{4}$

    A $\frac{5}{6}$

    B $\frac{1}{3}$

    C $1\frac{5}{36}$

    D $\frac{8}{9}$

10. $1\frac{5}{6}$ A $4\frac{11}{12}$

   $+3\frac{7}{12}$ B $5\frac{1}{6}$

          C $5\frac{5}{12}$

          D $4\frac{5}{6}$

11. 8   A $5\frac{3}{4}$

   $-3\frac{3}{4}$ B $4\frac{1}{4}$

          C $5\frac{1}{2}$

          D $4\frac{3}{4}$

Part 3 Applications

12. Mrs. Newman gave her sons $22.00 to go to the movies. They spent $9.50 on tickets. How much money did they have left for snacks?

    A $10.25   C $12.50

    B $13.75   D $14.50

13. David filled a container with $3\frac{5}{8}$ glasses of apple juice. He filled another container with $9\frac{5}{6}$ glasses of apple juice. How much apple juice did David put in the two containers?

    A $12\frac{3}{8}$ glasses   C $13\frac{5}{24}$ glasses

    B $13\frac{11}{24}$ glasses   D $14\frac{1}{6}$ glasses

14. Imogene packed 5060 pens into boxes that would hold 55 pens each. How many boxes did she pack?

    A 86   C 88

    B 90   D 92

15. Sam bundled six bags of tree limbs from his yard. Each bundle has a mass of 154 kg. How many kilograms of limbs did Sam put into bundles?

    A 873   C 597

    B 924   D 1000

16. At the flea market, Josiah spent $17.15 on baseball cards, $15.35 on football cards, and $12.55 on hockey cards. How much money did he spend in all?

    A $45.05   C $38.35

    B $42.95   D $39.40

17. Lenny poured $3\frac{1}{3}$ bags of party mix into bowls. After his party, $\frac{3}{5}$ of the party mix was gone. How many bags of party mix were eaten?

    A 2   C $1\frac{2}{3}$

    B $1\frac{4}{5}$ D 3

18. For a science project, Jerry worked $4\frac{2}{3}$ h and Brad worked $3\frac{4}{5}$ h. How much more time did Jerry work on the project than Brad?

    A $1\frac{1}{5}$ C $\frac{13}{15}$

    B $\frac{11}{15}$ D $1\frac{2}{15}$

STOP

ANSWER ROW **9** Ⓐ Ⓑ Ⓒ Ⓓ **11** Ⓐ Ⓑ Ⓒ Ⓓ **13** Ⓐ Ⓑ Ⓒ Ⓓ **15** Ⓐ Ⓑ Ⓒ Ⓓ **17** Ⓐ Ⓑ Ⓒ Ⓓ
            10 Ⓐ Ⓑ Ⓒ Ⓓ **12** Ⓐ Ⓑ Ⓒ Ⓓ **14** Ⓐ Ⓑ Ⓒ Ⓓ **16** Ⓐ Ⓑ Ⓒ Ⓓ **18** Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts	Part 2 Computation

1. How many digits are to the left of the decimal point in the product 14.3×9.2?

A 1   C 3
B 2   D 4

2. How many digits are to the right of the decimal point in the answer to the problem $0.06\overline{)14.9856}$?

A 2   C 4
B 3   D 6

3. What number is in the denominator in the simplest form of the quotient

$\frac{5}{12} \div \frac{11}{18}$?

A 15
B 22
C 23
D 132

4. What digit is in the hundredths place in the sum $14.31 + 129.4 + 6.941$?

A 0
B 5
C 6
D 9

5.
$$\begin{array}{r} 19\ 654 \\ 8\ 320 \\ +52\ 798 \end{array}$$

A 69 662
B 80 772
C 80 818
D 76 943

6.
$$\begin{array}{r} 43\ 061 \\ \times 75 \end{array}$$

A 3 436 845
B 2 965 011
C 3 229 575
D 3 516 750

7. $6\frac{2}{3} \div \frac{3}{10}$

A $8\frac{3}{10}$
B $6\frac{1}{5}$
C $18\frac{4}{9}$
D $22\frac{2}{9}$

8.
$$\begin{array}{r} 4\frac{1}{3} \\ -1\frac{2}{9} \end{array}$$

A $3\frac{1}{9}$
B $3\frac{2}{3}$
C $2\frac{4}{9}$
D $3\frac{7}{9}$

GO

ANSWER ROW
1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ

CUMULATIVE REVIEW

9. 1.095
0.427
+16.836

A 17.248
B 18.248
C 18.358
D 17.844

10. 39
−14.862

A 24.366
B 25.248
C 25.102
D 24.138

11. 8.1963
×11.2

A 88.639 26
B 91.798 56
C 90.468 52
D 93.014 76

Part 3 Applications

12. If one football championship ring cost $4975, how much would 34 rings for the entire team cost?

A $155 320   C $169 150
B $176 445   D $162 750

13. Jonas' school morning is $4\frac{3}{4}$ h long. How many $1\frac{3}{16}$-h classes does he have in the morning?

A 4   C $3\frac{1}{2}$
B 5   D 3

14. In baseball, Mattie has a batting average of .423. His friend, Alonzo, has a batting average of .319. How much better is Mattie's average?

A .087   C .163
B .104   D .115

15. For the holiday parade, Louis started with 532 pieces of candy. He passed out 368 pieces. How many pieces of candy did Louis have then?

A 188   C 175
B 164   D 152

16. If it cost $12.53 to send a 5-kg package, how much would it cost to send 12 5-kg packages?

A $150.36   C $110.42
B $126.97   D $158.01

17. The zookeeper had 42.53 kg of feed for the goats and sheep. He gave 21.75 kg to the goats. How many kilograms of feed were left for the sheep?

A 21.59   C 18.92
B 19.08   D 20.78

18. Felisha paid $22.54 for 23 L of gas. How much was the price of gas per litre?

A $1.01   C $0.89
B $1.02   D $0.98

STOP

ANSWER ROW **9** Ⓐ Ⓑ Ⓒ Ⓓ   **11** Ⓐ Ⓑ Ⓒ Ⓓ   **13** Ⓐ Ⓑ Ⓒ Ⓓ   **15** Ⓐ Ⓑ Ⓒ Ⓓ   **17** Ⓐ Ⓑ Ⓒ Ⓓ
10 Ⓐ Ⓑ Ⓒ Ⓓ   **12** Ⓐ Ⓑ Ⓒ Ⓓ   **14** Ⓐ Ⓑ Ⓒ Ⓓ   **16** Ⓐ Ⓑ Ⓒ Ⓓ   **18** Ⓐ Ⓑ Ⓒ Ⓓ

CHAPTER 4 CUMULATIVE REVIEW

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. How can you write the decimal 17.308 in word form?
   A seventeen and thirty-eight thousandths
   B seventeen and three hundred eighty thousandths
   C seventeen and three hundred eight thousandths
   D seventeen and three hundred eight hundredths

2. What digit is in the thousandths place in the product of 22.4 × 0.6153?
   A 2
   B 7
   C 8
   D 3

3. Which of the following fractions is not equivalent to $\frac{14}{18}$?
   A $\frac{7}{8}$
   B $\frac{7}{9}$
   C $\frac{28}{36}$
   D $\frac{56}{72}$

4. Which of the following is not a way to express the ratio 3 to 9?
   A 3:9
   B $\frac{3}{9}$
   C $\frac{9}{3}$
   D 3 to 9

Part 2 Computation

5. 97 612
   −3 485
   A 94 127
   B 94 927
   C 93 917
   D 95 037

6. 3218
   ×24
   A 77 882
   B 67 557
   C 77 232
   D 80 450

7. $2\frac{1}{4} \times \frac{3}{5} \times 3\frac{2}{3}$
   A $5\frac{3}{5}$
   B $6\frac{1}{10}$
   C $3\frac{1}{5}$
   D $4\frac{19}{20}$

8. $8\frac{4}{7}$
   $+3\frac{10}{21}$
   A $11\frac{2}{3}$
   B $12\frac{1}{21}$
   C 11
   D 12

GO

ANSWER ROW   1 ⒶⒷⒸⒹ   3 ⒶⒷⒸⒹ   5 ⒶⒷⒸⒹ   7 ⒶⒷⒸⒹ
             2 ⒶⒷⒸⒹ   4 ⒶⒷⒸⒹ   6 ⒶⒷⒸⒹ   8 ⒶⒷⒸⒹ

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CHAPTER 4
CUMULATIVE REVIEW
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CUMULATIVE REVIEW

9. $102.18
  − 65.73

A $36.45
B $47.45
C $167.91
D $40.15

10. 6.5)10.088

A 1.767
B 1.385
C 1.552
D 1.941

11. $\dfrac{6}{20} = \dfrac{3}{n}$

A $n = 10$
B $n = 8$
C $n = 12$
D $n = 6$

Part 3 Applications

12. For Serena's birthday party, her mother mixed $1\frac{2}{3}$ bottles of fruit punch, $\frac{5}{6}$ bottle of lemonade, and $1\frac{1}{4}$ bottles of ginger ale in a large punch bowl. How much mixture did they have in the bowl?

A $3\frac{3}{4}$ bottles
C $3\frac{1}{4}$ bottles
B $3\frac{5}{12}$ bottles
D $4\frac{1}{6}$ bottles

13. Carmen drew a picture of her friend Amy. She used a scale of 1 cm : 6 cm. Amy is 150 cm tall. How tall is Amy in the picture?

A 90 cm
C 25 cm
B 900 cm
D 2 cm

14. While driving a limousine last weekend, Ernie worked 18.5 h and was paid $159.10. How much did Ernie earn per hour?

A $8.60
C $5.55
B $10.40
D $7.25

15. For their new apartment, the Fouts family bought three pictures. The first one cost $56.85, the second one cost $48.92, and the third one cost $103.45. How much did they pay for all three pictures?

A $167.52
C $238.47
B $210.93
D $209.22

16. Last year for Thanksgiving, Margaret cooked a 6-kg turkey in 3 h. At that rate, how long should she cook this year's 9-kg turkey?

A 3 h
C 4.5 h
B 4 h
D 6 h

STOP

ANSWER ROW **9** Ⓐ Ⓑ Ⓒ Ⓓ **11** Ⓐ Ⓑ Ⓒ Ⓓ **13** Ⓐ Ⓑ Ⓒ Ⓓ **15** Ⓐ Ⓑ Ⓒ Ⓓ
10 Ⓐ Ⓑ Ⓒ Ⓓ **12** Ⓐ Ⓑ Ⓒ Ⓓ **14** Ⓐ Ⓑ Ⓒ Ⓓ **16** Ⓐ Ⓑ Ⓒ Ⓓ

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CHAPTER 5 CUMULATIVE REVIEW

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. Which of the following is equivalent to $\frac{137}{100}$?

  A 137%

  B 137

  C 13.7%

  D 0.137

2. Change 15% to a fraction in simplest form.

  A $\frac{15}{100}$ C $\frac{3}{20}$

  B $\frac{6}{40}$ D $\frac{1}{5}$

3. Which of the following sums is the greatest?

  A 27.016 + 23.947

  B 22.9 + 28.309

  C 14.27 + 32.061

  D 40.007 + 7.635

4. Which percent is equivalent to 0.4625?

  A 0.4625%   C $46\frac{1}{4}$%

  B $46\frac{1}{2}$%   D $46\frac{3}{4}$%

Part 2 Computation

5.   16 942
    408 379
      +205

  A 428 417

  B 396 741

  C 410 386

  D 425 526

6. $37\overline{)89\,634}$

  A 2506 r31

  B 2422 r20

  C 2417 r2

  D 2398 r11

7. $5\frac{6}{7}$
   $-2\frac{3}{4}$

  A $3\frac{4}{7}$

  B $2\frac{11}{28}$

  C $3\frac{3}{28}$

  D $3\frac{9}{28}$

8. 62.189
  +4.573

  A 66.762

  B 57.616

  C 66.652

  D 67.662

CUMULATIVE REVIEW

GO

ANSWER ROW   **1** Ⓐ Ⓑ Ⓒ Ⓓ   **3** Ⓐ Ⓑ Ⓒ Ⓓ   **5** Ⓐ Ⓑ Ⓒ Ⓓ   **7** Ⓐ Ⓑ Ⓒ Ⓓ

                 2 Ⓐ Ⓑ Ⓒ Ⓓ   **4** Ⓐ Ⓑ Ⓒ Ⓓ   **6** Ⓐ Ⓑ Ⓒ Ⓓ   **8** Ⓐ Ⓑ Ⓒ Ⓓ

9. 75.23
    ×1.025

    A   78.231 95
    B   77.110 75
    C   762.1402
    D   7.506 49

10. $\dfrac{6}{15} = \dfrac{4}{n}$

    A $n = 4$
    B $n = 6$
    C $n = 8$
    D $n = 10$

11. $23\frac{1}{4}\% =$

    A   0.2325
    B   0.023 25
    C   2.735
    D   23.05

12. $82.75\% =$

    A   8.275
    B   0.082 75
    C   0.8275
    D   827.5

Part 3 Applications

13. The Littman School of Cooking just received $15\frac{1}{2}$ bags of sugar. If each bag weighs 10 kg, how many kilograms of sugar did the school receive?

    A   145 kg
    B   156 kg
    C   150 kg
    D   155 kg

14. Allison was asked to place some hurdles evenly apart in a distance of 440 m. If she had 22 hurdles, how far apart would they be?

    A   20 m
    B   25 m
    C   30 m
    D   35 m

15. The Murrays were able to get a mortgage from the local bank for $200 000.00. If they bought a house and furniture for $189 456.58, how much money would they have left over?

    A $11 493.52
    B $9188.37
    C $10 543.42
    D $12 650.12

16. At Balki's Bakery, the ratio of bagels sold to biscuits sold is 3 to 5. At this rate, how many biscuits will be sold if 15 bagels are sold?

    A   25
    B   30
    C   28
    D   21

17. Eight crates of melons have a mass of 240 kg. What is the mass of 12 crates of melons?

    A   300 kg
    B   320 kg
    C   340 kg
    D   360 kg

18. Penelope sold $\frac{3}{4}$ of the roses that were delivered today. What percent of the roses did she sell?

    A   50%
    B   75%
    C   25%
    D   33%

STOP

ANSWER ROW **9** ⒶⒷⒸⒹ **11** ⒶⒷⒸⒹ **13** ⒶⒷⒸⒹ **15** ⒶⒷⒸⒹ **17** ⒶⒷⒸⒹ
10 ⒶⒷⒸⒹ **12** ⒶⒷⒸⒹ **14** ⒶⒷⒸⒹ **16** ⒶⒷⒸⒹ **18** ⒶⒷⒸⒹ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. What is the remainder of the quotient $82\overline{)27\,167}$?

   A 30
   B 25
   C 35
   D 40

2. What multiplication problem can you use to find 63% of 900?

   A 63 × 900
   B 63 × 90
   C 6.3 × 900
   D 0.63 × 900

3. Which of the following statements is true about the sum of $9\frac{5}{8}$ and $11\frac{3}{5}$?

   A The sum is less than 20.
   B The sum is greater than 22.
   C The numerator is 9.
   D The denominator is 21.

4. How many digits are to the right of the decimal point in the answer to the problem 4.047 × 19.13?

   A 4   C 6
   B 5   D 7

Part 2 Computation

5. 4261
   ×307

   A 1 586 816
   B 1 312 388
   C 1 308 127
   D 1 292 608

6. $3\frac{4}{5} \times 5\frac{1}{3}$

   A $18\frac{2}{3}$
   B $15\frac{4}{15}$
   C $20\frac{11}{15}$
   D $20\frac{4}{15}$

7. $1189.32
   −749.56

   A $439.76
   B $1938.88
   C $340.86
   D $440.77

8. 0.101
   ×2

   A 0.0202
   B 2.02
   C 20.2
   D 0.202

GO

ANSWER ROW   1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ
                   2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ

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CHAPTER 6
CUMULATIVE REVIEW
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CUMULATIVE REVIEW

9. $\dfrac{2}{9} = \dfrac{n}{27}$

   A $n = 3$
   B $n = 4$
   C $n = 6$
   D $n = 7$

10. $\dfrac{5}{10} =$

   A 50%
   B 75%
   C 100%
   D 25%

11. _____ is 6% of 200.

   A 15
   B 12
   C 11
   D 33

12. 33 is 75% of _____.

   A 67
   B 44
   C 23
   D 47

Part 3 Applications

13. Lisa has $3\frac{3}{4}$ h to memorize a song to play on the piano. The song is $4\frac{1}{2}$ pages long. If she wants to spend the same amount of time on each page, how much time does she have for each?

   A $1\frac{1}{4}$ h
   C $\frac{5}{6}$ h
   B $\frac{2}{3}$ h
   D $1\frac{1}{8}$ h

14. For the wedding reception, Maria's mother wants to have 12 different flowers in a vase at each table. There will be 60 tables. How many flowers will Maria's mother need?

   A 720
   C 640
   B 680
   D 750

15. Neil needs to divide 7.395 L of water evenly into five containers. How much will each container hold?

   A 0.960 L
   C 1.855 L
   B 1.479 L
   D 2.027 L

16. By halftime, the star basketball player for the Woodchucks had made 4 foul shots out of 7 attempts. At this rate, how many foul shots will he make out of 14 attempts?

   A 10
   C 8
   B 12
   D 9

17. Madison bought a yo-yo at Trevor's Toy Store. It was on sale for 15% off the original price. What fractional part of the original price did she save?

   A $\frac{1}{10}$
   C $\frac{1}{15}$
   B $\frac{3}{25}$
   D $\frac{3}{20}$

18. Emille paid $525 as a deposit on an apartment rental. This was 20% of the whole rental amount. How much is the whole rental amount?

   A $2625
   C $1975
   B $2355
   D $2880

STOP

ANSWER ROW **9** Ⓐ Ⓑ Ⓒ Ⓓ **11** Ⓐ Ⓑ Ⓒ Ⓓ **13** Ⓐ Ⓑ Ⓒ Ⓓ **15** Ⓐ Ⓑ Ⓒ Ⓓ **17** Ⓐ Ⓑ Ⓒ Ⓓ

          10 Ⓐ Ⓑ Ⓒ Ⓓ **12** Ⓐ Ⓑ Ⓒ Ⓓ **14** Ⓐ Ⓑ Ⓒ Ⓓ **16** Ⓐ Ⓑ Ⓒ Ⓓ **18** Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. What digit is in the hundredths place in the quotient $4.1\overline{)9.7539}$?

 A 2
 B 7
 C 9
 D 3

2. Which of the following is not equal to $\frac{4}{5}$?

 A 0.8   C 80%
 B 8%   D $\frac{80}{100}$

3. What is the formula for calculating interest?

 A *principal = interest × rate × time*
 B *interest = principal × rate × time*
 C *time = principal × interest × rate*
 D *rate = principal × interest × time*

4. What fraction of a year is approximately 270 days?

 A $\frac{1}{4}$ C $\frac{1}{2}$
 B $\frac{1}{3}$ D $\frac{3}{4}$

Part 2 Computation

5. $54\overline{)134\,406}$

 A 2362
 B 2591
 C 1977
 D 2489

6. $3\frac{5}{6} \div 4\frac{3}{4}$

 A $1\frac{11}{46}$
 B $\frac{46}{57}$
 C $1\frac{11}{18}$
 D $\frac{23}{45}$

7. 316.5
 $\times 3.04$

 A 346.9
 B 221.55
 C 962.16
 D 736.11

8. $\dfrac{n}{10} = \dfrac{18}{30}$

 A $n = 6$
 B $n = 8$
 C $n = 4$
 D $n = 5$

GO

CUMULATIVE REVIEW

ANSWER ROW 1 Ⓐ Ⓑ Ⓒ Ⓓ 3 Ⓐ Ⓑ Ⓒ Ⓓ 5 Ⓐ Ⓑ Ⓒ Ⓓ 7 Ⓐ Ⓑ Ⓒ Ⓓ
               2 Ⓐ Ⓑ Ⓒ Ⓓ 4 Ⓐ Ⓑ Ⓒ Ⓓ 6 Ⓐ Ⓑ Ⓒ Ⓓ 8 Ⓐ Ⓑ Ⓒ Ⓓ

9. _____ is 46% of 5.
   A 1.9
   B 2.1
   C 2.2
   D 2.3

10. 148 is 40% of _____.
    A 360
    B 276
    C 2.7
    D 370

11. Find the interest on a loan if the principal is $550, the rate is 12%, and the time is 3 years.
    A $152
    B $198
    C $203
    D $176

12. Find the interest on a loan if the principal is $1340, the rate is $7\frac{1}{2}\%$, and the time is 4 years.
    A $378
    B $392
    C $402
    D $420

Part 3 Applications

13. A highway crew had to spray paint a dot every 4 m of a distance of 3520 m on a new road that was just paved. How many dots will they end up spray painting on the road?

    A 660
    B 880
    C 770
    D 990

14. Rob had $6\frac{3}{5}$ baskets of corn. His neighbour bought $2\frac{1}{3}$ baskets to feed some of his farm animals. How much corn did Rob have left?
    A $4\frac{4}{15}$
    B $5\frac{1}{3}$
    C $4\frac{2}{5}$
    D $4\frac{7}{15}$

15. When the community garage sale was over, Mrs. Bond had made $458.25, Mr. Apple had made $372.50, and Ms. Page had made $561.90. How much money did all three make?
    A $1734.50
    B $1488.45
    C $915.25
    D $1392.65

16. Within 12 years, a hotel received 42 layers of paint on the outside walls. At this rate, how many layers would the hotel have in 18 years?
    A 63
    B 61
    C 58
    D 66

17. Mr. Hodges invited 280 people to the company picnic. He expected 75% of those invited to show up. How many people did Mr. Hodges expect to attend the picnic?
    A 180
    B 195
    C 210
    D 225

18. Tam deposited $1400 in her savings account in January. She will earn 6% interest each year. How much interest will she receive next January?
    A $75
    B $84
    C $92
    D $104

STOP

ANSWER ROW 9 Ⓐ Ⓑ Ⓒ Ⓓ   11 Ⓐ Ⓑ Ⓒ Ⓓ   13 Ⓐ Ⓑ Ⓒ Ⓓ   15 Ⓐ Ⓑ Ⓒ Ⓓ   17 Ⓐ Ⓑ Ⓒ Ⓓ
            10 Ⓐ Ⓑ Ⓒ Ⓓ   12 Ⓐ Ⓑ Ⓒ Ⓓ   14 Ⓐ Ⓑ Ⓒ Ⓓ   16 Ⓐ Ⓑ Ⓒ Ⓓ   18 Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. Which of the following problems has a difference of 25.43?

   A   36.397 − 11.057
   B   34.19 − 8.76
   C   17.783 − 15.24
   D   35.1 − 9.37

2. What number is in the numerator in the simplest form of the sum $6\frac{3}{7} + 14\frac{5}{9}$?

   A   63   C   27
   B   62   D   35

3. What operation do you perform to convert centimetres to metres?

   A   multiply by 100
   B   multiply by 1000
   C   divide by 1000
   D   divide by 100

4. How many grams are in 1000 kg?

   A   1
   B   10
   C   100 000
   D   1 000 000

Part 2 Computation

5.
   83 912
     6 470
+15 189

   A   105 571
   B   94 461
   C   116 560
   D   95 471

6.
  $6\frac{2}{3}$
$-3\frac{1}{5}$

   A $3\frac{2}{3}$
   B $3\frac{1}{5}$
   C $2\frac{4}{5}$
   D $3\frac{7}{15}$

7. $23.07
    ×48

   A $1107.36
   B $1001.42
   C $1102.93
   D $1218.57

8. $\dfrac{15}{n} = \dfrac{1}{3}$

   A $n = 9$
   B $n = 60$
   C $n = 45$
   D $n = 5$

GO

CUMULATIVE REVIEW

ANSWER ROW   **1** Ⓐ Ⓑ Ⓒ Ⓓ   **3** Ⓐ Ⓑ Ⓒ Ⓓ   **5** Ⓐ Ⓑ Ⓒ Ⓓ   **7** Ⓐ Ⓑ Ⓒ Ⓓ
             2 Ⓐ Ⓑ Ⓒ Ⓓ   **4** Ⓐ Ⓑ Ⓒ Ⓓ   **6** Ⓐ Ⓑ Ⓒ Ⓓ   **8** Ⓐ Ⓑ Ⓒ Ⓓ

9. _____ is 82% of 40.

   A   24.1
   B   48.8
   C   20.5
   D   32.8

10. 84 is 20% of _____.

   A   16.8
   B   1680
   C   540
   D   420

11. 7.34 kL =

   A   0.734 L
   B   7340 L
   C   73.4 L
   D   734 L

12. Find the interest on a loan if the principal is $2360, the rate is $5\frac{3}{4}\%$, and the time is 5 years.

   A $687.25   C $678.50
   B $669.06   D $619.50

Part 3 Applications

13. At Sal's Diner, each server makes $1800 a month. As an incentive, Sal promised each server a bonus of 5% of the server's monthly salary if there are no complaints from the customers for that month. How much in bonus would each server get?

   A $180   C $90
   B $270   D $360

14. Adam had a balance of $3419.07 in his chequing account on Monday. He wrote a cheque for $689.58 on Tuesday. How much money does Adam have left in his chequing account?

   A $2315.77   C $3062.84
   B $2931.45   D $2729.49

15. While playing darts, Keisha tried to hit the bullseye 25 times and only hit it three times. At that rate, how many times would Keisha hit the bullseye if she tried 125 times?

   A   10   C   12
   B   15   D   18

16. Trudie has six jump ropes. Each jump rope is 2.7 m long. What is the combined length of all six jump ropes?

   A   0.45 m   C   16.2 m
   B   61.2 m   D   16 m

17. The Thompsons borrowed $950 for $\frac{1}{2}$ year. How much interest will be charged if the interest rate is 7% per year?

   A $33.25   C $66.50
   B $332.50   D $29.75

18. If a drop of water has a mass of about 67 mg, how many grams are in 100 drops of water?

   A   67   C   0.67
   B   6.7   D   6700

STOP

ANSWER ROW
  9 Ⓐ Ⓑ Ⓒ Ⓓ **11** Ⓐ Ⓑ Ⓒ Ⓓ **13** Ⓐ Ⓑ Ⓒ Ⓓ **15** Ⓐ Ⓑ Ⓒ Ⓓ **17** Ⓐ Ⓑ Ⓒ Ⓓ
  10 Ⓐ Ⓑ Ⓒ Ⓓ **12** Ⓐ Ⓑ Ⓒ Ⓓ **14** Ⓐ Ⓑ Ⓒ Ⓓ **16** Ⓐ Ⓑ Ⓒ Ⓓ **18** Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. How many digits are to the left of the decimal point in the product 216.3×0.034?

   A 1
   B 3
   C 4
   D 5

2. What problem can you use to find $25\frac{1}{2}\%$ of 42?

   A 0.255×42
   B 25.5×42
   C 2.55×42
   D 25.5×4.2

3. What operation do you perform to convert millimetres to metres?

   A multiply by 1000
   B divide by 100
   C divide by 1000
   D multiply by 100

4. What operation do you perform to convert hours to seconds?

   A multiply by 3600
   B multiply by 60
   C divide by 3600
   D divide by 60

Part 2 Computation

5. $3\frac{4}{7} \div 1\frac{2}{3}$

   A $3\frac{1}{21}$
   B $1\frac{2}{3}$
   C $2\frac{1}{7}$
   D $3\frac{2}{7}$

6. $1.1\overline{)34.012}$

   A 32.34
   B 30.92
   C 28.52
   D 26.17

7. $\dfrac{2}{n} = \dfrac{14}{35}$

   A $n = 5$
   B $n = 1.6$
   C $n = 7$
   D $n = 28$

8. Find the interest on a loan if the principal is \$26 450, the rate is $4\frac{1}{2}\%$, and the time is 3 years.

   A \$2965.50   C \$4110.25
   B \$3570.75   D \$3865.75

GO ▶

CUMULATIVE REVIEW

ANSWER ROW
1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ

9. ___ is $1\frac{1}{4}$% of 420.

A 3.36
B 2.98
C 5.30
D 5.25

10. 3500 kg =

A 0.35 t
B 35 t
C 3.5 t
D 350 t

11. 6 m =

A 6000 mm
B 600 m
C 6000 cm
D 60 cm

12. 2.75 kg =

A 275 g
B 2750 g
C 27.5 g
D 27 500 g

Part 3 Applications

13. In 2003, the population of Greenville was 162 772 people. In 2004, the population rose to 172 094 people. What was the total increase in population from 2003 to 2004?

A 7452   C 8743
B 8302   D 9322

14. It takes $1\frac{1}{8}$ min to make each doodad. How long does it take to make 26 doodads?

A $26\frac{3}{8}$ min   C $30\frac{1}{2}$ min
B $29\frac{1}{4}$ min   D $32\frac{1}{8}$ min

15. The Clean Glow Shaving Cream Company made a larger container to hold its product and advertised it as "35% more free." If the original container held 340 g of shaving cream, how much more are you getting in the new container?

A 76 grams   C 119 grams
B 97 grams   D 134 grams

16. How much interest would Mr. Gonzalez pay for a 180-day loan of $750 at a rate of 7%?

A $15.50   C $22.75
B $18.25   D $26.25

17. Joanna's baby weighed 4.5 kg when it was born. How many grams did the baby weigh?

A 45   C 450
B 0.45   D 4500

18. Yesterday, Kate mowed the lawn in 2 h and 35 min. How many minutes did it take Kate to mow the lawn?

A 150   C 165
B 155   D 175

STOP

ANSWER ROW   **9** Ⓐ Ⓑ Ⓒ Ⓓ   **11** Ⓐ Ⓑ Ⓒ Ⓓ   **13** Ⓐ Ⓑ Ⓒ Ⓓ   **15** Ⓐ Ⓑ Ⓒ Ⓓ   **17** Ⓐ Ⓑ Ⓒ Ⓓ
                 10 Ⓐ Ⓑ Ⓒ Ⓓ   **12** Ⓐ Ⓑ Ⓒ Ⓓ   **14** Ⓐ Ⓑ Ⓒ Ⓓ   **16** Ⓐ Ⓑ Ⓒ Ⓓ   **18** Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. What number is in the denominator in the simplest form of the sum $15\frac{3}{7} + 22\frac{1}{5}$?

   A 22
   B 35
   C 37
   D 57

2. What digit is in the tens place of the quotient $2.7\overline{)345.762}$?

   A 0
   B 1
   C 2
   D 8

3. Which side lengths describe an isosceles triangle?

   A 4, 5, 6
   B 3, 9, 12
   C 2, 5, 7
   D 7, 7, 10

4. $\angle x$ has a measure of 115°. What type of angle is $\angle x$?

   A acute angle
   B obtuse angle
   C right angle
   D straight angle

Part 2 Computation

5. $2\frac{1}{6} \times 3\frac{9}{10}$

   A $8\frac{9}{20}$
   B $7\frac{1}{6}$
   C $6\frac{3}{20}$
   D $9\frac{9}{10}$

6.
   $$\begin{array}{r} 61.954 \\ 8.047 \\ +23.169 \end{array}$$

   A 92.160
   B 82.050
   C 83.061
   D 93.170

7. $\dfrac{18}{n} = \dfrac{3}{4}$

   A $n = 20$
   B $n = 13.5$
   C $n = 26$
   D $n = 24$

8. _____ is 40% of 40.

   A $21\frac{1}{2}$
   B 23
   C 16
   D 26

GO ➤

CUMULATIVE REVIEW

ANSWER ROW
1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ

9. Find the interest of a loan if the principal is $950, the rate is $6\frac{3}{4}$%, and the time is 4 years.

   A $222.50   C $305.50

   B $256.50   D $274.25

10. 16.8 m =

   A 1680 cm

   B 1.68 cm

   C 0.168 cm

   D 168 cm

11. 1600 L =

   A 1 600 000 kL

   B 16 kL

   C 0.16 kL

   D 1.6 kL

12. Find the measure of the missing angle of a quadrilateral with the angles 95°, 60°, and 110°.

   A 360°   C 95°

   B 90°   D 5°

Part 3 Applications

13. Susan, Milo, Pam, and Ed plan on flying from their hometown to Ottawa at the end of the month. All four plane tickets cost a total of $944. What is the cost per person?

   A $323   C $286

   B $212   D $236

14. Adrianna would like to buy a dress and a pair of shoes for $102.98. She only has $55.35 in cash. She will have to write a cheque for the balance of the purchase. For how much will her cheque be written?

   A $47.63   C $36.33

   B $39.82   D $42.51

15. Charlie needs ground beef to make lasagna. The local grocery store sells ground beef for $1.79 a kilogram. If Charlie needs 5 kg, how much will he pay for the ground beef?

   A $7.30   C $9.45

   B $8.95   D $6.80

16. During a sale, the price of a riding lawn mower was reduced by $259. The lawn mower regularly sells for $1295. The price reduction is what percent of the regular price?

   A 10%   C 20%

   B 15%   D 25%

17. Eleven servings of the same size were made from a box of oatmeal with a mass of 627 g. How many grams of oatmeal were in each serving?

   A 57   C 65

   B 62   D 71

18. Al worked 925 min. How many complete hours did Al work?

   A 6 h   C 19 h

   B 14 h   D 15 h

STOP
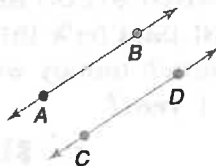
NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. What type of lines are $\overrightarrow{AB}$ and $\overrightarrow{CD}$?

  A parallel
  B intersecting
  C perpendicular
  D transversals

2. Which of the following is not equivalent to $\frac{24}{10}$?

  A $\frac{12}{5}$ C $\frac{8}{3}$
  B $2\frac{2}{5}$ D $\frac{48}{20}$

3. What is the formula for the area of a circle?

  A $A = 2 \times \pi \times r$
  B $A = \pi \times r \times r$
  C $A = \pi \times d$
  D $A = \pi \times d \times d$

4. Which equation can you use to find the perimeter of a rectangle that is 18 m by 11 m?

  A $p = 18 \times 11$
  B $p = (2 \times 18) + (2 \times 11)$
  C $p = 18 + 11$
  D $p = (2 + 18) \times (2 + 11)$

Part 1 Computation

5. Find the perimeter of a rectangle that is 4.5 m by 6 m.

  A 17 m
  B 27 m
  C 21 m
  D 23 m

6. 52.29
  $\times 0.43$

  A 22.4847
  B 13.5627
  C 52.72
  D 27.6997

7. $\frac{2}{5} =$

  A 10%
  B 40%
  C 25%
  D 0.04%

8. Find the area of a circle with a radius of 7 cm. Use 3.14 for π.

  A about 154 cm^2
  B about 14 cm^2
  C about 49 cm^2
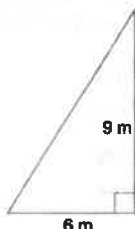 D about 159 cm^2

GO

CUMULATIVE REVIEW

ANSWER ROW
1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ

9. 109.23 L =
   A 10.923 kL
   B 1.0923 kL
   C 0.109 23 kL
   D 0.010 923 kL
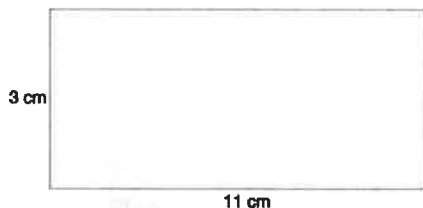
10. Find the area of the triangle.
   A 15 m^2
   B 30 m^2
   C 7.5 m^2
   D 27 m^2

   9 m
   6 m

11. 2.25 km =
   A 22.5 m
   B 22 500 m
   C 225 m
   D 2250 m

12. Find the area of the rectangle.

   3 cm
   11 cm

   A 30 cm^2
   B 33 cm^2
   C 14 cm^2
   D 8 cm^2

Part 3 Applications

13. On a long business trip, Harold had to fly 920 km from Montréal to Halifax, 1480 km from Halifax to Toronto, 1730 km from Toronto to Winnipeg, and 2090 km from Winnipeg back to Montréal. How many total kilometres did Harold fly on his trip?
   A 5630
   B 6220
   C 5470
   D 5650

14. Mr. Lewis spent 32% of his monthly salary on new furniture that cost $1440. What is his monthly salary?
   A $4500
   B $2222
   C $4700
   D $3500

15. If you deposited $1200 into a savings account that paid $5\frac{1}{2}$% interest each year, how much money would you have after 1 year?
   A $1860
   B $1818
   C $1266
   D $1226

16. Farmer Bauer harvested 250 kg of peas. If Farmer Case's harvest was 10 times bigger than Farmer Bauer's, how many tonnes of peas would Farmer Case have harvested?
   A 0.25
   B 2.5
   C 25
   D 2500

17. The circumference of a bowling ball is 67.5 cm. How many millimetres is that?
   A 675
   B 6.75
   C 0.675
   D 0.0675

18. Mr. and Mrs. Indigo bought a lot to build a house. The lot is 355 m by 190 m. What is the area of the lot?
   A 1090 m^2
   B 68 020 m^2
   C 6745 m^2
   D 67 450 m^2

STOP

ANSWER ROW 9 Ⓐ Ⓑ Ⓒ Ⓓ 11 Ⓐ Ⓑ Ⓒ Ⓓ 13 Ⓐ Ⓑ Ⓒ Ⓓ 15 Ⓐ Ⓑ Ⓒ Ⓓ 17 Ⓐ Ⓑ Ⓒ Ⓓ
                   10 Ⓐ Ⓑ Ⓒ Ⓓ 12 Ⓐ Ⓑ Ⓒ Ⓓ 14 Ⓐ Ⓑ Ⓒ Ⓓ 16 Ⓐ Ⓑ Ⓒ Ⓓ 18 Ⓐ Ⓑ Ⓒ Ⓓ

NAME _____

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

1. Which of the following differences is the greatest?
   A 126.43 − 49.017
   B 90.071 − 9.67
   C 270.15 − 192.56
   D 106.431 − 24.018

2. Approximately what fraction of a year is 90 days?
   A $\frac{1}{4}$
   B $\frac{1}{3}$
   C $\frac{1}{2}$
   D $\frac{3}{4}$

3. The distance around a figure is called _____.
   A diameter
   B perimeter
   C area
   D radius

4. Which equation can you use to find the volume of a cylinder that has a radius of 7 m and a height of 11.5 m?
   A $V = \pi \times 7 \times 7 \times 11.5$
   B $V = \pi \times 7 \times 11.5$
   C $V = \pi + 14 + 11.5$
   D $V = \pi \times 14 \times 11.5$

Part 2 Computation

5. 4362
   ×51
   A 230 202
   B 222 615
   C 216 852
   D 222 462

6. $7 \div 2\frac{2}{3}$
   A $1\frac{5}{6}$
   B $2\frac{1}{8}$
   C $2\frac{5}{8}$
   D $3\frac{2}{3}$

7. $42\overline{)39\,628}$
   A 943 r22
   B 916 r38
   C 923 r17
   D 941 r26

8. 16% =
   A $6\frac{1}{4}$
   B $1\frac{3}{5}$
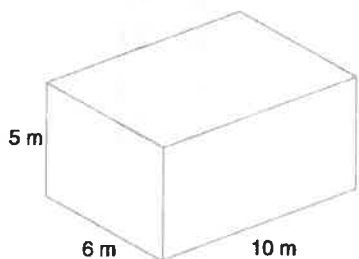   C $\frac{1}{5}$
   D $\frac{4}{25}$

GO

CUMULATIVE REVIEW

ANSWER ROW 1 Ⓐ Ⓑ Ⓒ Ⓓ 3 Ⓐ Ⓑ Ⓒ Ⓓ 5 Ⓐ Ⓑ Ⓒ Ⓓ 7 Ⓐ Ⓑ Ⓒ Ⓓ
2 Ⓐ Ⓑ Ⓒ Ⓓ 4 Ⓐ Ⓑ Ⓒ Ⓓ 6 Ⓐ Ⓑ Ⓒ Ⓓ 8 Ⓐ Ⓑ Ⓒ Ⓓ

9. 1050 s =

    A 1.75 min

    B 17.5 min

    C 6300 min

    D 63 000 min

10. 3540.1 g =

    A 3.5401 kg

    B 35 401 kg

    C 35.401 kg

    D 354.01 kg

11. Find the surface area of the figure.

5 m, 6 m, 10 m

    A $21 \, m^2$ C $30 \, m^2$

    B $280 \, m^2$ D $60 \, m^2$

12. Find the volume of the rectangular prism.

2.5 cm, 3 cm, 4 cm
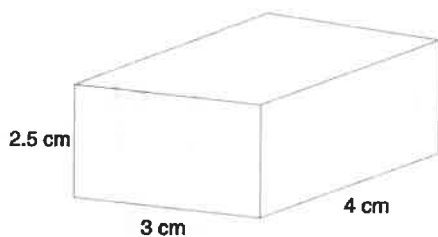
    A $59 \, cm^3$

    B $25 \, cm^3$

    C $30 \, cm^3$

    D $60 \, cm^3$

Part 3 Applications

13. Twenty-one students each ran $3\frac{2}{3}$ laps around the track. How many laps did the students run in all?

    A $72\frac{1}{3}$ C 68

    B $79\frac{2}{3}$ D 77

14. Colin swam 112 lengths in 2 h. At that rate, how many lengths could he swim in 5 hours?

    A 224   C 280

    B 268   D 310

15. A rectangular storage space is three times as long as it is wide. If its height is 3 m and its width is 2 m, what is the volume of the storage space?

    A $30 \, m^3$ C $34 \, m^3$

    B $32 \, m^3$ D $36 \, m^3$

16. During one season, Mr. Humanic's hockey team won 38 games and lost 12. What percent of the games they played did the team win?

    A 70%   C 81%

    B 76%   D 85%

17. How many square metres of carpet will Joe need to install in a banquet room that is 22 m by 28 m?

    A 616   C 598

    B 634   D 666

18. It takes 50 L of gasoline to fill the tank of Lorenzo's car. How many millilitres would that be?

    A 5000 mL   C 50 000 mL

    B 500 mL   D 500 000 mL

STOP

ANSWER ROW **9** Ⓐ Ⓑ Ⓒ Ⓓ **11** Ⓐ Ⓑ Ⓒ Ⓓ **13** Ⓐ Ⓑ Ⓒ Ⓓ **15** Ⓐ Ⓑ Ⓒ Ⓓ **17** Ⓐ Ⓑ Ⓒ Ⓓ

                  10 Ⓐ Ⓑ Ⓒ Ⓓ **12** Ⓐ Ⓑ Ⓒ Ⓓ **14** Ⓐ Ⓑ Ⓒ Ⓓ **16** Ⓐ Ⓑ Ⓒ Ⓓ **18** Ⓐ Ⓑ Ⓒ Ⓓ

CHAPTER 13 CUMULATIVE REVIEW

Do each problem.
Find the correct answer.
Mark the space for the answer.

Part 1 Concepts

**1.** How can you write 87.3% as a decimal?

 A 87.3
 B 0.873
 C 8.73
 D 87 300

2. How many litres are in 2 kL?

 A 20 000 L
 B 200 L
 C 2000 L
 D 20 L

3. $\angle a$ and $\angle b$ are supplementary angles. If the measure of $\angle b$ is 76°, what is the measure of $\angle a$?

 A 14°
 B 76°
 C 104°
 D 114°

4. When you multiply 158.3 by 0.01, where do you move the decimal point in 158.3?

 A 2 places to the left
 B 3 places to the left
 C 2 places to the right
 D 3 places to the right

Part 2 Computation

5. 84 963
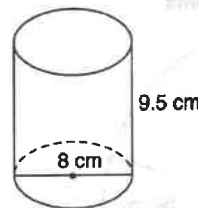   −3 517

 A 82 607   C 85 456
 B 81 446   D 88 480

6. Find the volume of the figure.
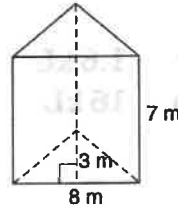
 A 168 m³   C 21 m³
 B 31 m³   D 84 m³

7. Find the approximate volume of the cylinder.

 A 470 cm³   C 17.5 cm³
 B 477.28 cm³   D 60 cm³

8. $\frac{4}{5} \times \frac{8}{9} \times 1\frac{1}{2}$

 A $2\frac{11}{90}$ C $1\frac{2}{3}$
 B $1\frac{1}{15}$ D $1\frac{3}{10}$

ANSWER ROW   1 Ⓐ Ⓑ Ⓒ Ⓓ   3 Ⓐ Ⓑ Ⓒ Ⓓ   5 Ⓐ Ⓑ Ⓒ Ⓓ   7 Ⓐ Ⓑ Ⓒ Ⓓ
                 2 Ⓐ Ⓑ Ⓒ Ⓓ   4 Ⓐ Ⓑ Ⓒ Ⓓ   6 Ⓐ Ⓑ Ⓒ Ⓓ   8 Ⓐ Ⓑ Ⓒ Ⓓ

9. _____ is 125% of 80.

   A 115   C 64
   B 156   D 100

10. Find the interest on a loan if the principal is $2200, the rate is 8%, and the time is 9 months.

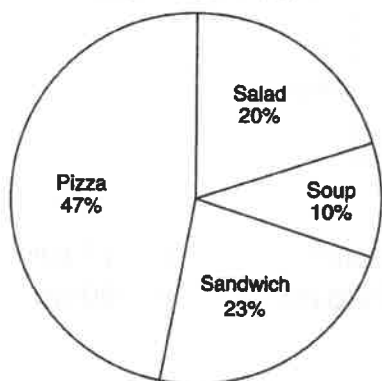   A $75   C $88
    B $132   D $116

11. 1600 L =

    A 0.16 kL   C 1.6 kL
    B 160 kL   D 16 kL

12. 5 h 21 min =

    A 19 260 min   C 141 min
    B 321 min   D 471 min

Part 3 Applications

13.
Lunches of 200 Students

Salad 20%
Pizza 47%
Soup 10%
Sandwich 23%

How many students eat pizza?

   A 94   C 47
   B 153   D 147

14. Deanna bought three new sweaters at a department store. The sweaters were $38.75, $22.18, and $40.50. The tax on Deanna's purchase was $15.21. What was the total cost of Deanna's purchase?

    A $101.43   C $86.22
    B $116.64   D $96.32

15. If Gregory borrows $1200 from Scott for 180 days at 5% annual interest, what is the total amount Gregory will pay back?

    A $1360   C $1320
    B $1290   D $1230

16. Mrs. Pierson's triangular lot has a base of 68 m and a height of 58 m. What is the area of Mrs. Pierson's lot?

    A 1972 m^2 C 1314 m^2
    B 2058 m^2 D 1676 m^2

17. What is the volume of a large block of ice that has a length of 9 m, a width of 6 m, and a height of 7 m?

    A 254 m^3 C 378 m^3
    B 312 m^3 D 396 m^3

18. Monica rolled a number cube once. What is the probability that she rolled a 0?

    A $\frac{1}{2}$ C $\frac{1}{6}$
    B $\frac{1}{3}$ D 0

STOP

ANSWER ROW **9** Ⓐ Ⓑ Ⓒ Ⓓ   **11** Ⓐ Ⓑ Ⓒ Ⓓ   **13** Ⓐ Ⓑ Ⓒ Ⓓ   **15** Ⓐ Ⓑ Ⓒ Ⓓ   **17** Ⓐ Ⓑ Ⓒ Ⓓ
　　　　　　　 10 Ⓐ Ⓑ Ⓒ Ⓓ   **12** Ⓐ Ⓑ Ⓒ Ⓓ   **14** Ⓐ Ⓑ Ⓒ Ⓓ   **16** Ⓐ Ⓑ Ⓒ Ⓓ   **18** Ⓐ Ⓑ Ⓒ Ⓓ