Apprenticeship and Workplace Mathematics 10
Examination Booklet
Sample A
Teacher Version
Revised November 2, 2011

DO NOT OPEN ANY EXAMINATION MATERIALS UNTIL INSTRUCTED TO DO SO.

Examination Instructions

1. On your Answer Sheet, fill in the bubble (Form A, B, C, D, E, F, G or H) that corresponds to the letter on this Examination Booklet.

2. You may require a ruler (metric and imperial).

3. Protractors are **not** permitted.

4. When using your calculator (scientific or approved graphing calculator):
   - use the programmed value of π rather than the approximation of 3.14.
   - round only in the final step of the solution.

5. Diagrams are not necessarily drawn to scale.

6. When the examination begins, remove the data pages located in the centre of this booklet.

7. Read the Examination Rules on the back of this booklet.

SAMPLE EXAMINATION — TEACHER VERSION

The purpose of the Sample Examinations is to give teachers and students a wide range, but not an exhaustive list, of questions that could appear in the provincial examinations. Examinations are developed to be as congruent as possible with the curriculum within the parameters of large-scale testing. However, this type of examination does not allow for the assessment of all the mathematical processes described in *The Common Curriculum Framework for Grades 10–12 Mathematics*, 2008 (CCF).

The Teacher Versions include a number of comments that clarify the terminology or intent of a question. They also provide some alternative solutions or state expectations, whenever appropriate. The comments are given in the context of a specific question and are likely to apply to other questions. However, the comments will only appear once, therefore, teachers are encouraged to review both samples.

Teachers are encouraged to have their students use the Data Pages throughout the year so that they become familiar with their content before taking the provincial examination.

The pathway Apprenticeship and Workplace Mathematics has been designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into the majority of trades and for direct entry into the work force (CCF, p. 15). Whenever possible, the exam questions have been set in a meaningful context as recommended by the framework (CCF, p. 17). The examples in this examination do not constitute an exhaustive list of all the possible trades or occupations.

PART A: MULTIPLE-CHOICE QUESTIONS
(calculator not permitted)

Suggested Time: 30 minutes

Value: 12 marks
Allowable Time: 40 minutes

INSTRUCTIONS: **No calculator may be used for this part of the examination.** For each question, select the **best** answer and record your choice on the **blue Answer Sheet** provided. Using an HB pencil, completely fill in the bubble that has the letter corresponding to your answer. You have a **maximum of 40 minutes** to work on this section.

You have **Examination Booklet Form A**. In the box above #1 on your **Answer Sheet**, fill in the bubble as follows.

Exam Booklet Form/ Cahier d'examen	A	B	C	D	E	F	G	H
	●	○	○	○	○	○	○	○

☞ The intent of the "Calculator not permitted" section is to test the Mental Mathematics and Estimation [ME] process. Please note that correct responses are often rounded to the nearest number.

1. A pair of scissors is 20 cm long. Estimate this length in imperial units.

*
- A. 8 inches
- B. 50 inches
- C. 1 foot
- D. 2 feet

2. The dimensions of a door are 7 feet by 36 inches. Express these dimensions in yards.

- A. 7×3
*
- B. $2\frac{1}{3} \times 1$
- C. $2\frac{1}{3} \times 3$
- D. 7×1

3. A ribbon is 4 feet 10 inches long. It needs to be cut into pieces that are 8 inches in length. How many full length pieces will the ribbon provide?

    A. 5
    B. 6
*   C. 7
    D. 8

4. Flowers are to be planted six inches apart along the perimeter of the garden represented below. Estimate the number of flowers needed.
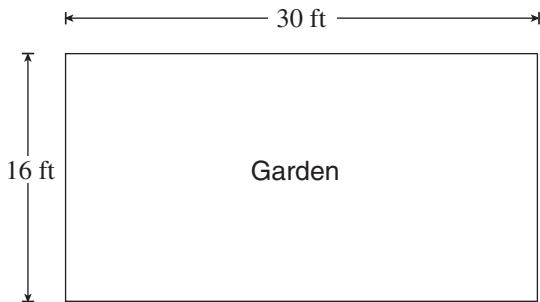
    A.   15
    B.   45
    C.   90
*   D. 180

5. Craig must completely cover the wall represented below with $4' \times 8'$ sheets of plywood. A lumberyard charges him a fee per cut made to the plywood. What is the fewest number of cuts required?

Wall — 9' – 3"

9' – 6"

Plywood — 8'

4'
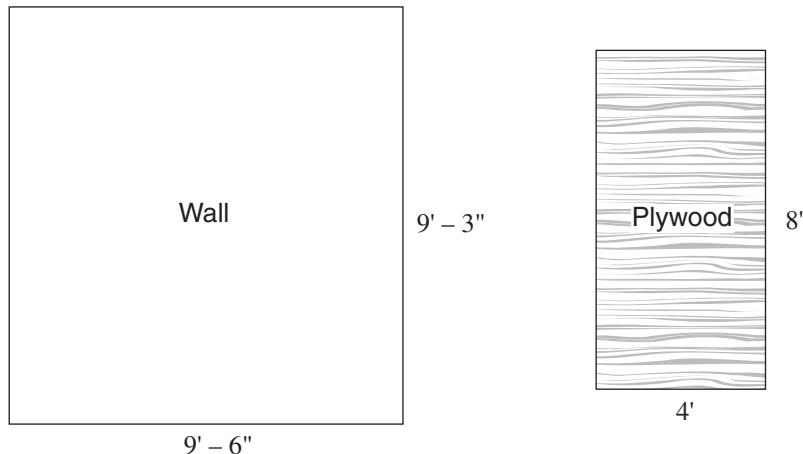
A. 2
* B. 3
C. 4
D. 5

6. Each square on the grid below represents one square metre. What is the approximate area of the surface of the pond?

Island

Pond
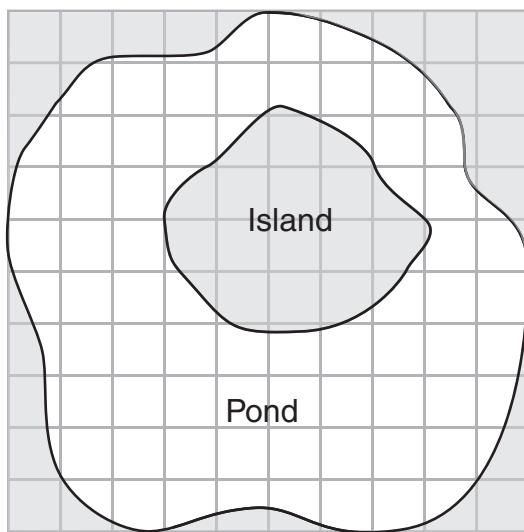
A. $30 - 40 \text{ m}^2$
B. $50 - 60 \text{ m}^2$
* C. $65 - 75 \text{ m}^2$
D. $85 - 95 \text{ m}^2$

7. A picture frame is 2 inches wide. Estimate the length of the diagonal join, x.
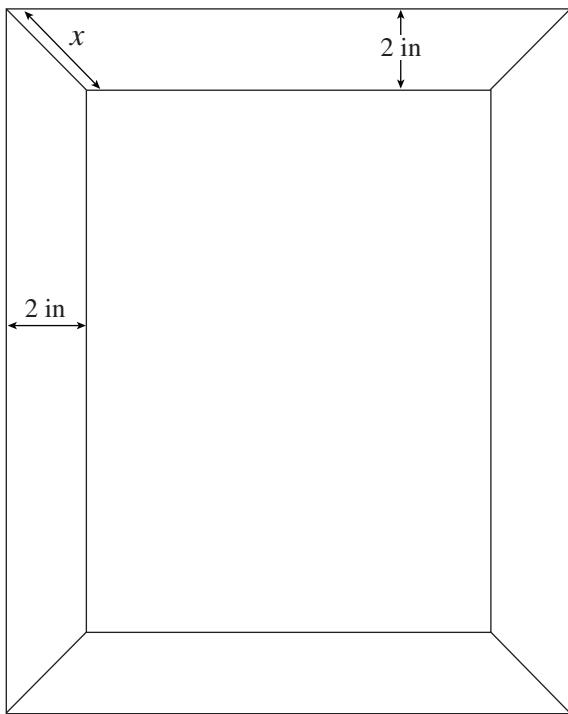
- A. 2 in
- * B. 3 in
- C. 4 in
- D. 8 in

☞ Diagrams are not necessarily drawn to scale in provincial examinations. However when a measurement or visual estimate is required, there will be a note stating "this diagram is drawn to scale." On the electronic examinations, measurement tools will automatically appear on screen as required.

8. Estimate the measure of ∠DBE .
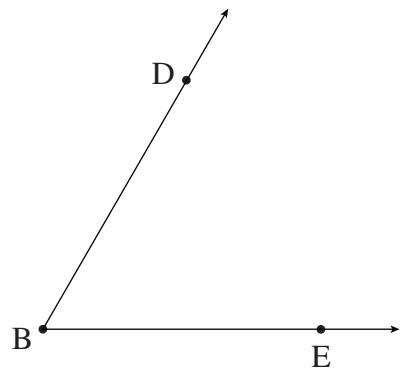
Note: This diagram is drawn to scale.

    A. 22.5°
    B. 30°
*   C. 60°
    D. 90°

Use the following table to answer questions 9 and 10.

Canadian Bank Foreign Exchange Rates for Buying and Selling (cash rates for June 28, 2009)			
Country	Currency Name/ Currency Code	Bank Buying Rate (CAD)	Bank Selling Rate (CAD)
Australia	Dollar (AUD)	0.8788	0.9926
Brazil	Real (BRL)	0.5046	0.6578
Canada	Dollar (CAD)	—	—
Cayman Is.	Dollar (KYD)	1.2568	1.5000
Euro	Euro (EUR)	1.5552	1.6877
France	Franc (FRF)	0.2222	Refer to Euro
Great Britain	Pound (GBP)	1.8413	1.9681
Hong Kong	Dollar (HKD)	0.1389	0.1597
India	Rupee (INR)	0.01964	0.03034
Indonesia	Rupiah (IDR)	0.000089	0.000130
Israel	Shekel, New (ILS)	0.2554	0.3241
Japan	Yen (JPY)	0.011647	0.012579
Mexico	Peso (MXN)	0.0760	0.0927
Philippines	Peso (PHP)	0.02084	0.02839
Saudi Arabia	Riyal (SAR)	0.2734	0.3338
South Africa	Rand (ZAR)	0.1233	0.1598
South Korea	Won (KRW)	0.000774	0.001050
Switzerland	Franc (CHF)	1.0213	1.1085
United States	Dollar (USD)	1.1210	1.1810

9. A customer wants to exchange 200 CAD for Swiss Francs (CHF). How should the clerk at the bank calculate the number of CHF to give him?

    A. Use 1.0213, since the customer is buying CHF, and divide 200 by 1.0213.
    B. Use 1.0213, since the customer is buying CHF, and multiply 1.0213 by 200.
*   C. Use 1.1085, since the bank is selling him CHF, and divide 200 by 1.1085.
    D. Use 1.1085, since the bank is selling him CHF, and multiply 1.1085 by 200.

☞   Students will need to convert between Canadian currency and foreign currencies using different methods as indicated in the curriculum. Some questions will require manipulating a conversion factor and others reading a table (see also question 51). The overall format and labels on the currency exchange table will remain constant within the Apprenticeship and Workplace Mathematics 10 examinations. The Exchange Values, Currency Name/Currency Code and Country may change over time.

10. Stella wants to exchange 1500 CAD for Cayman Island dollars (KYD). How many KYD will she get?

     A.   750
*   B. 1000
     C. 1875
     D. 2250

11. Determine the combined federal and provincial tax deductions for an employee whose weekly gross pay is $389.50. Use claim code 1.

     A. $22.75
     B. $25.90
*   C. $26.65
     D. $64.90

> ☞ This question assesses the understanding of net pay. Data tables are provided as a tool to enable students to derive the correct response.

12. To fill a coffee mug at a local shop costs $2.50. The shop sells coffee beans for $12 per pound. Each pound makes enough coffee to fill the mug 100 times. Approximately how many times greater is the cost of drinking the coffee at the shop compared to drinking it at home?

     A.   2
     B.   5
*   C.   20
     D. 240

This is the end of Part A (calculator not permitted).

If there is some time left, you have two options:

  i) Make sure you have answered all the questions. You will not be able to go back to this section at the end of 40 minutes.

  ii) You may proceed to the rest of the examination without the use of a calculator; there are many questions that do not require a calculator. Make sure you flag any questions you skip to remember to go back to them later.

Do not access your calculator until directed by the supervisor. At the end of the 40 minutes, the supervisor will give you permission to access your calculator.

Value: 48 marks   **Suggested Time: 90 minutes**

INSTRUCTIONS:	For each question, select the **best** answer and record your choice on the **white Answer Sheet** provided. Using an HB pencil, completely fill in the bubble that has the letter corresponding to your answer.

☞   When going over the sample examinations in class, teachers may want to discuss with their students which questions from Part B can be answered without a calculator.

13. In which set are the SI prefixes correctly matched with the powers of ten?

*   A. kilo 10^3
     deca 10^1
     centi 10^{-2}

     B. hecto 1000

         deci $\dfrac{1}{100}$ or 0.01

         milli $\dfrac{1}{10\ 000}$ or 0.0001

     C. hecto 10^3
         deca 10^1
         milli 10^{-2}

     D. kilo   1000

         centi 100

         deca $\dfrac{1}{10}$ or 0.1

14. As an estimation strategy, what could be used to approximate one metre?

     A. the length of your foot
*   B. the length of your arm
     C. the length of your hand
     D. the width of your shoulders

☞   Referents are important for estimating purposes. Some common referents are:
     –   a step is about 3 feet
     –   the width of a finger is about 1 cm
     –   the thickness of a fingernail is about 1 mm

15. The length of a fireplace mantle is $6' - 9''$. Express this length in metres.

*   A.   2.1
        B.   4.5
        C.   20.6
        D.   205.9

16. How many British gallons are equivalent to 24 US gallons?

*   A.   20.0
        B.   22.8
        C.   25.2
        D.   28.8

17. The top of a 20 foot long railing is to be painted. The diameter of the roller to be used is 8.9 cm. Paint needs to be replenished after 6 rotations of the roller. How many times does the painter have to add paint to his roller?

        A.   12
        B.   9
        C.   5
*   D.   4

18. The diameter of a tray is 42 cm and the diameter of a glass is 56 mm. Based on math calculations, a server thought he would be able to fit 56 glasses onto the tray. In fact, he is able to fit only 37 glasses. Approximately how much space on the tray is not covered by glasses?

        A.   1800 cm^2
*   B.   475 cm^2
        C.   185 cm^2
        D.   155 cm^2

19. The quilt shown below was created with two different fabric colours.
Estimate the ratio of dark fabric to light fabric.
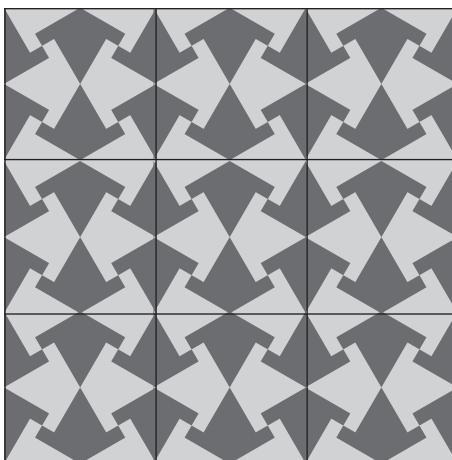
*   A.   1:1
     B.   1:3
     C.   2:3
     D.   3:4

20. The Vernier calliper shown below is calibrated in SI units. What is the measurement on the calliper?
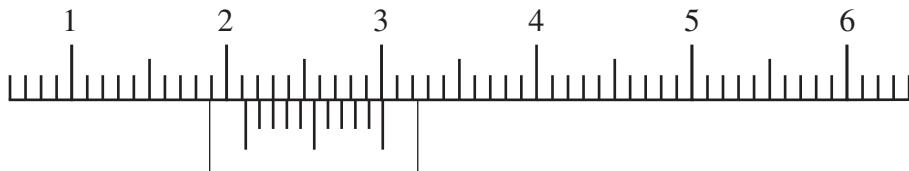
     A.   2.01 cm
*   B.   2.12 cm
     C.   2.55 cm
     D.   3.05 cm

☞   For the provincial examinations, students will be expected to know how to read measurements from the following instruments:

     –   micrometers
     –   clinometers
     –   protractors
     –   tape measures
     –   Vernier callipers
     –   thermometers

21. The foundation walls of a cabin are constructed as follows:

- $8\frac{1}{4}$" thick concrete
- $2\frac{7}{8}$" thick insulation board on both interior and exterior sides
- $\frac{1}{2}$" thick cedar on the exterior side only

Which solution would be used to determine the total thickness of the foundation walls?

A. $2\left(2\frac{7}{8}+\frac{1}{2}\right)+8\frac{1}{4}$

B. $8\frac{1}{4}-\left(2\frac{7}{8}+\frac{1}{2}\right)$

C. $8\frac{1}{4}+2\frac{7}{8}+\frac{1}{2}$

* D. $\frac{1}{2}+2\left(2\frac{7}{8}\right)+8\frac{1}{4}$

☞ The intent of this question is that students will recognize reasonable answers and not perform the actual calculation. This question could be enriched by having students determine the errors in the distractors.

22. How many sheets of $\frac{5}{8}$" plywood are in a sling load (or stack) 5' high?

A. 37
B. 38
C. 80
* D. 96

☞ Specific workplace words such as "sling load", "kerf", "pace" and "bolt" will appear, from time to time, in provincial examinations. The meanings of these terms will be explained, or a drawing will be provided, if such understanding is necessary for choosing a correct answer.

23. The area of a picture is 2925 mm^2. Express this area in cm^2.

    A. 2.925

*   B. 29.25

    C. 292.5

    D. 29 250

> ☞ The skill of conversions of area is fundamental to this course. Students will need to develop this skill using a variety of strategies in a variety of contexts.

24. In a gymnasium, a basketball "key" is a painted area on the floor. It consists of a semicircle plus a rectangle, as shown below. Find the area of the semicircle.

|←   6.6 m   →|

2.6 m
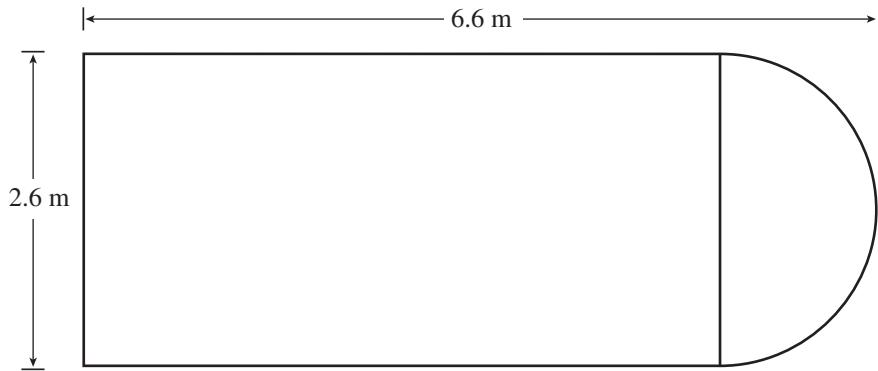
*   A.   2.65 m^2

    B.   5.31 m^2

    C. 10.62 m^2

    D. 21.24 m^2

25. Find the surface area of the cone drawn below.
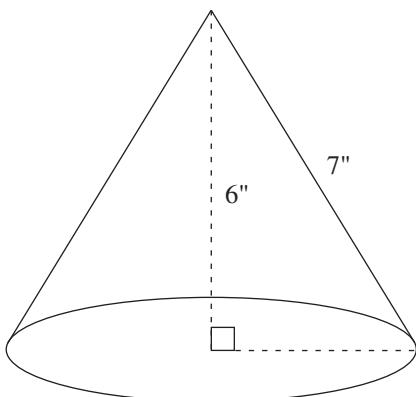
A.   75.4 sq in
*   B.   120.13 sq in
C.   245.0 sq in
D.   468.2 sq in

☞ In some trades, decimal notation is used with imperial measurements. For example, in surveying, distances are expressed in feet, to two decimal places, rather than in feet and inches.

26. Which statement correctly expresses a similarity between two triangles in the diagram below?
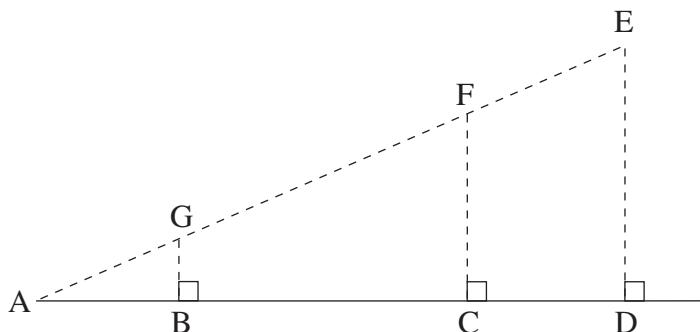
- A. ΔAGB ~ ΔCED
- B. ΔAGB ~ ΔACF
- * C. ΔACF ~ ΔADE
- D. ΔAFC ~ ΔADE

☞ • When naming polygons, including triangles, the order of letters is important. The order of letters allows one to orient the shapes correctly revealing the correspondence of the angles and sides. Answer B implies that line AG is proportional to line AC and that GB is proportional to CF. This is untrue, making answer B incorrect.

• The following symbols will be used in provincial exams:
  – parallel lines ||
  – perpendicular lines ⊥
  – angles ∠ and ⊿
  – right angle ∟
  – similarity ~
  – congruency ≅
  – angle theta θ

27. The shapes of the top two layers of the wedding cake shown below are similar.
    Find the length, x, of the middle layer.
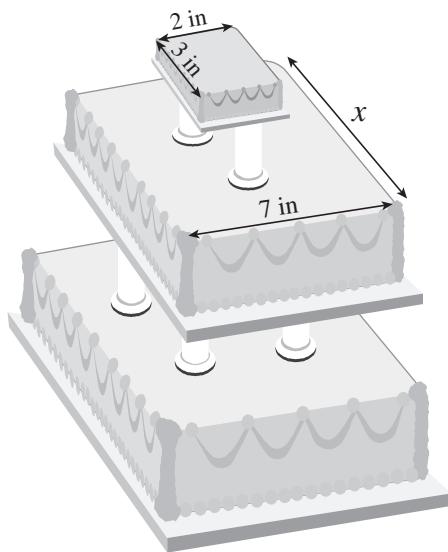
A.   3.5 in
B.   4.7 in
C.   8.0 in
*   D.   10.5 in

👉   For any polygon more complex than a triangle, both equality of angles **and** proportionality of sides must be shown. This is required in order to prove similarity.

28. Which property proves that $\triangle ABC$ is similar to $\triangle DEF$?
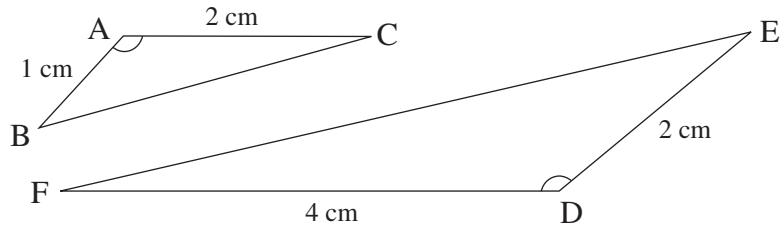
* A. $\dfrac{AB}{DE} = \dfrac{AC}{DF}$

B. $AC = ED$

C. $\angle A = \angle D$

D. $\dfrac{AC}{BC} = \dfrac{DE}{EF}$

29. Gina drew a scale representation of a field (see Polygon C). For instance, she drew a line 2.2 cm to represent the actual measure (20 m) of this side (AD). Gina needs to complete the drawing of Polygon D so that both polygons are similar.

Polygon C

A 20 m D
33 m
28 m
B 33 m C

Polygon D

E 25 m H
35 m
G
F
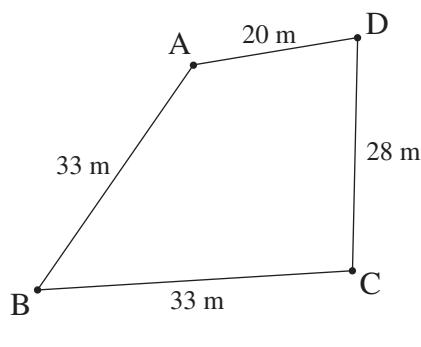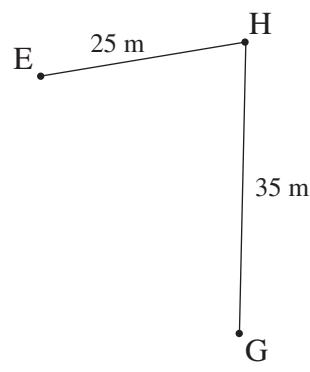
What is the measure of line FG?

A. 3.63 cm
* B. 4.54 cm
C. 18.75 cm
D. 41.25 cm

30. Which of the triangles below are similar?

I II III IV

2 cm
3 cm

1 cm 1.8 cm
1.5 cm

5.4 cm
4.5 cm

5 cm
8 cm
9.4 cm
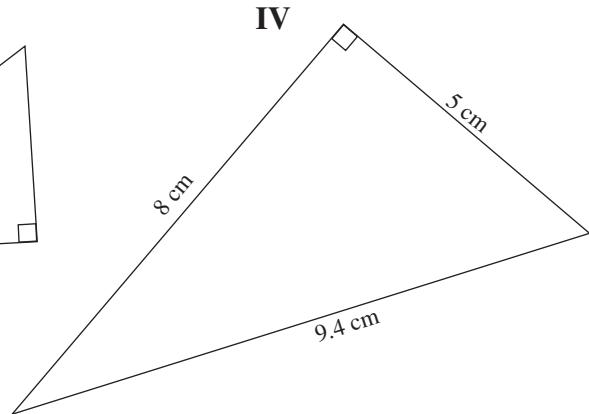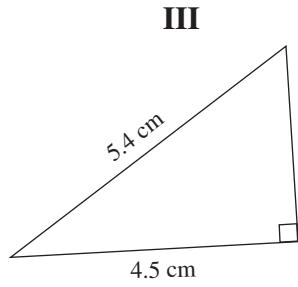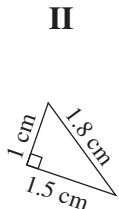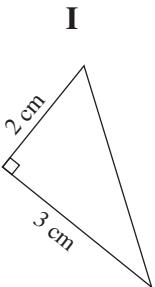
A. I and II only
B. II and IV only
* C. I, II and III only
D. II, III and IV only

31. What is the length of the stringer of the staircase below?

Stringer

6' – 3"

9' – 6"
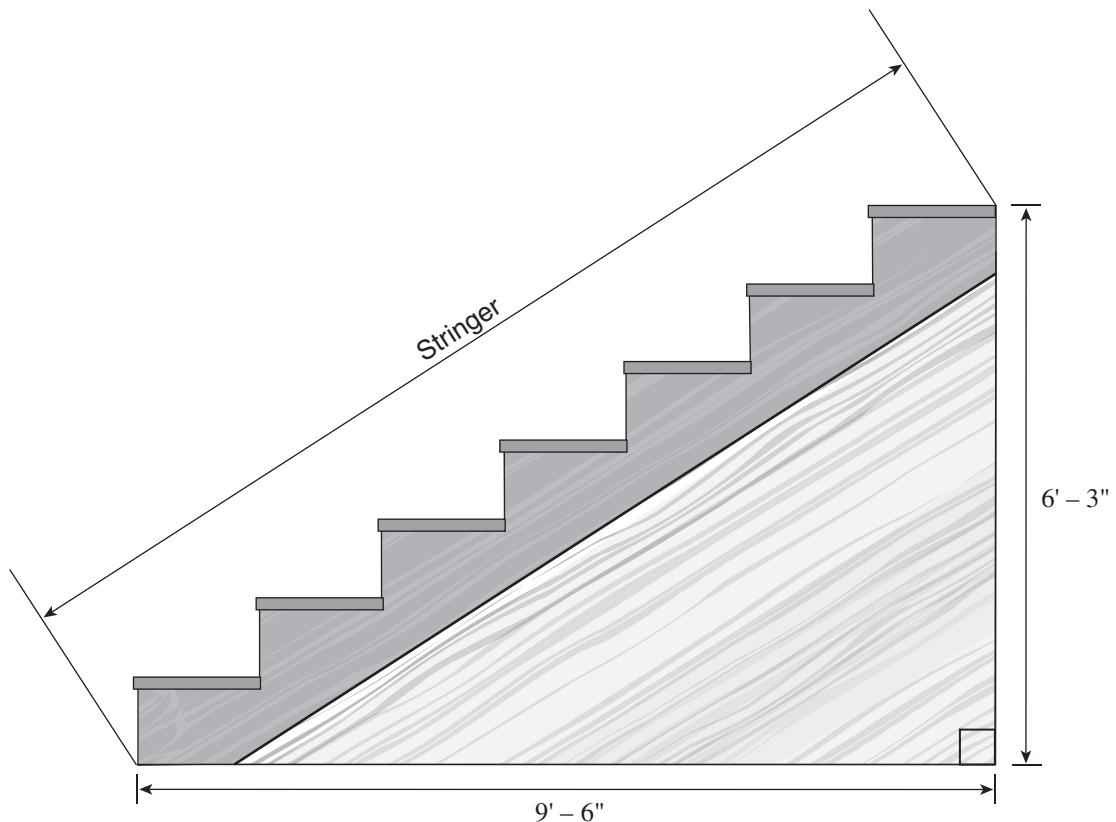
    A.   4.0 ft
    B.   7.2 ft
*   C.   11.4 ft
    D. 15.8 ft

32. Which of the triangles below is a right triangle?

*   A.

5.4 dm   9.0 dm

7.2 dm

B.

6 dm   9 dm

8 dm

C.

3.5 dm   5.5 dm

4.5 dm

D.

5 dm   15 dm

10 dm
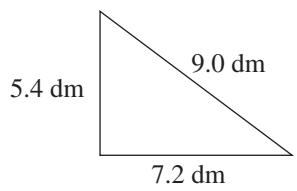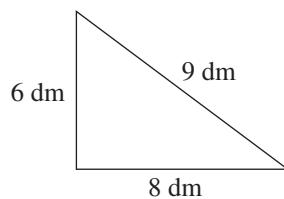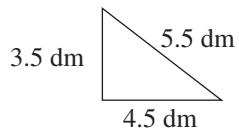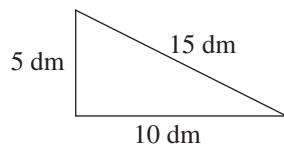
33. Part of a quilting pattern is shown below.

3 cm

2 cm

4 cm

x cm

2 cm

3 cm
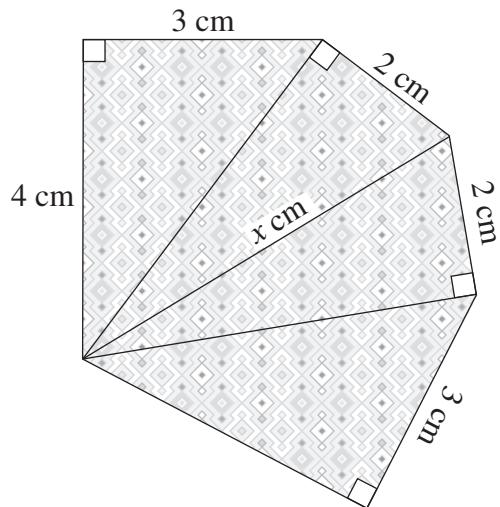
What is the value of *x* in the diagram?

A.   3 cm
B. $\sqrt{12}$ cm
C.   5 cm
* D. $\sqrt{29}$ cm

34. In which of the following situations is there enough information given to calculate *x*?

A.

A

River

x

D 24 m E

48 m

B   C

B.

16.0 m

x

* C.

13.5 m

x

←6.0 m→

D.

40°

x
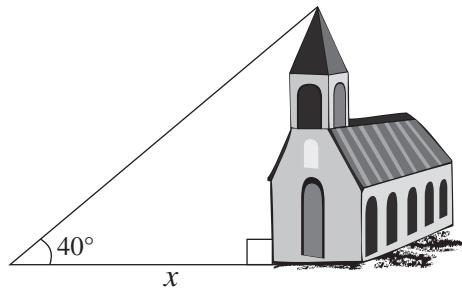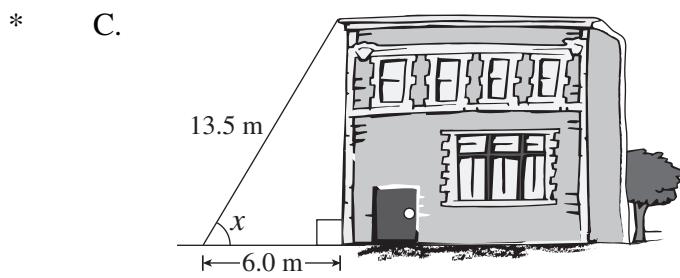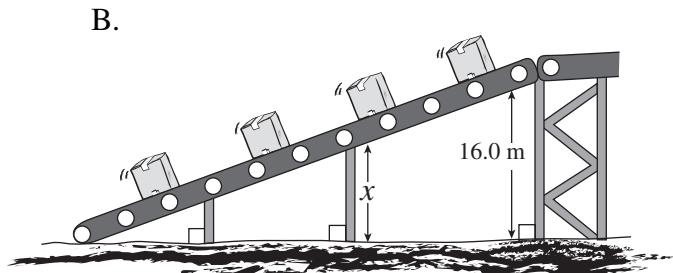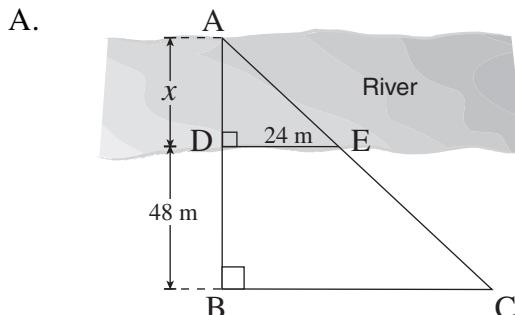
35. The brace is 2.75 m long and must be anchored 1.5 m from the base of the wall. What angle does the brace make with the ground?

Wall panel

Brace
2.75 m

1.5 m
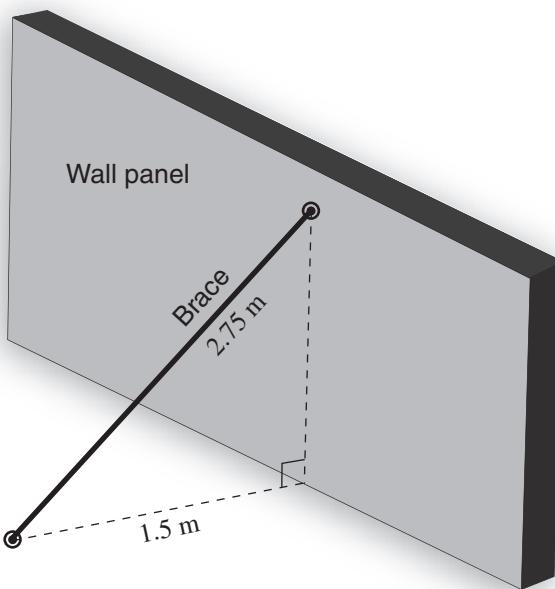
    A. 27°
    B. 33°
*   C. 57°
    D. 61°

36. Consider the similar triangles shown below. Select the relationship that could be used to generalize the formula for the tangent ratio for $\angle A$.
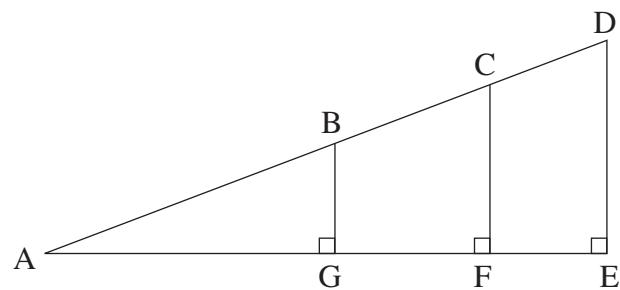
* A. $\dfrac{BG}{AG} = \dfrac{CF}{AF} = \dfrac{DE}{AE}$

   B. $\dfrac{AB}{AG} = \dfrac{AC}{AF} = \dfrac{AD}{AE}$

   C. $BG = CF = DE$

   D. $\triangle ABG \cong \triangle ACF \cong \triangle ADE$

37. Which set has two true statements about the diagram below?
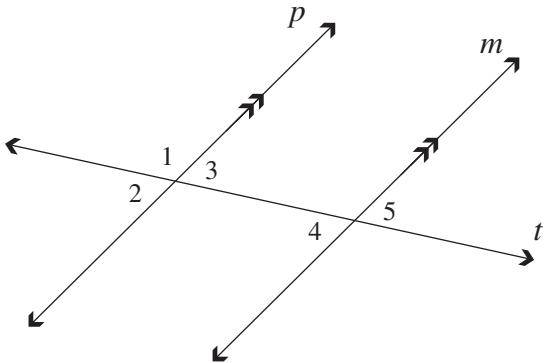
A. • $\angle 2 \cong \angle 5$
    • $\angle 3$ and $\angle 4$ are corresponding angles

B. • there are two transversals and one parallel line
    • $\angle 3$ and $\angle 4$ are alternate interior angles

C. • $\angle 1 \cong \angle 5$
    • $\angle 3$ and $\angle 4$ are alternate interior angles

*   D. • there are two parallel lines and one transversal
    • $\angle 3$ and $\angle 4$ are alternate interior angles

38. In the diagram below, the wall is supported by a brace cut from $2' \times 4'$ lumber.
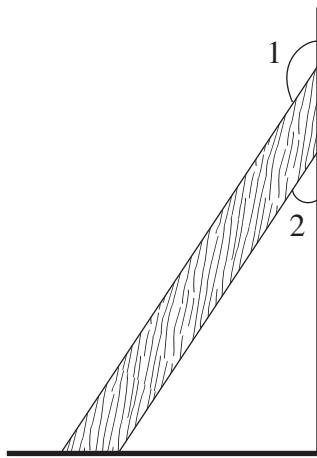
What is the relationship between $\angle 1$ and $\angle 2$?

A. corresponding angles
B. alternate exterior angles
C. vertically opposite angles
*   D. exterior angles on the same side of the transversal

39. The diamond pattern of the golf vest has parallel lines as shown below. Which angle(s) is (are) congruent to ∠3 ?
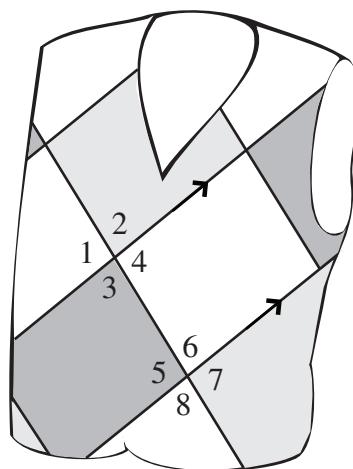
A. ∠2 only

B. ∠2 and ∠7 only

* C. ∠2, ∠6 and ∠8 only

D. ∠2, ∠6, ∠7 and ∠4 only

40. In the diagram below, which lines are parallel?
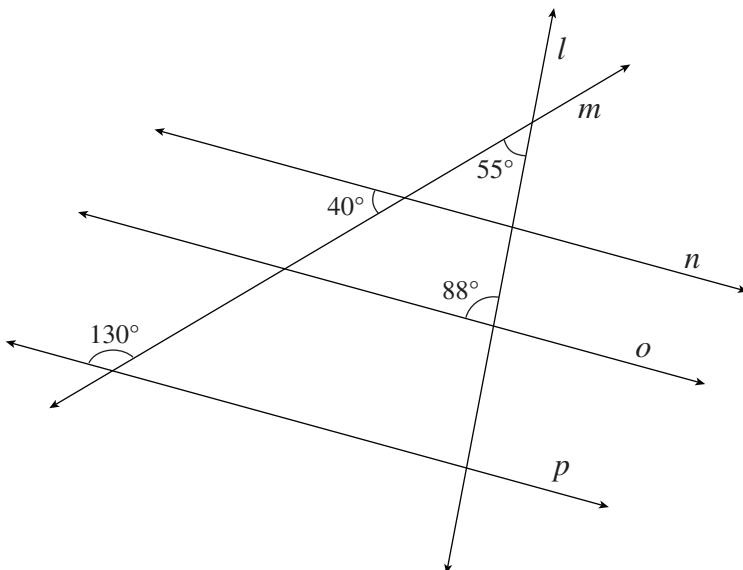
A. $n \parallel p$ only

B. $n \parallel o$ only

C. $n \parallel o \parallel p$

* D. no parallel lines

☞ Lines crossed by a transversal have angle relationships that are named "corresponding angles," "alternate interior angles," etc., regardless of whether the lines are parallel.

41. In the diagram below, what are the measures of $\angle a$, $\angle b$ and $\angle c$?
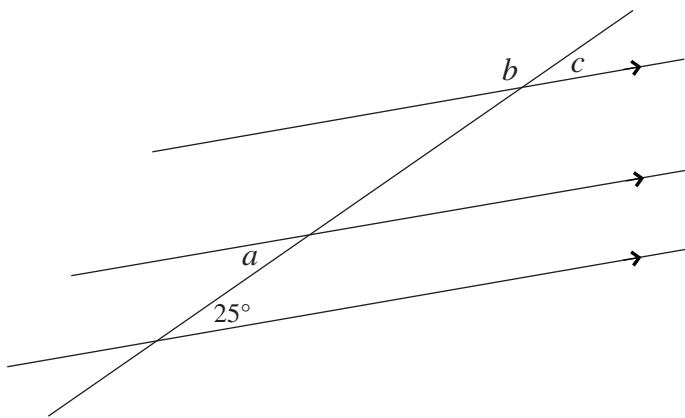
* A. $\angle a = 25°$, $\angle b = 155°$, $\angle c = 25°$

B. $\angle a = 155°$, $\angle b = 25°$, $\angle c = 155°$

C. $\angle a = 155°$, $\angle b = 25°$, $\angle c = 25°$

D. $\angle a = 25°$, $\angle b = 165°$, $\angle c = 15°$

42. Which set of diagrams shows two examples of complementary angles and one example of supplementary angles?

* A.

    50°
    40°

    30° 150°

B.

    35°
    25°

C.

    45°
    135°

D.

    30°
    60°
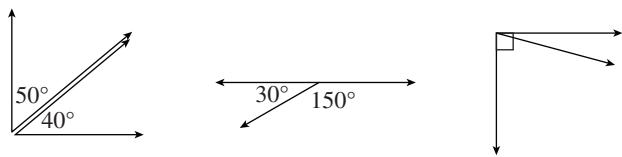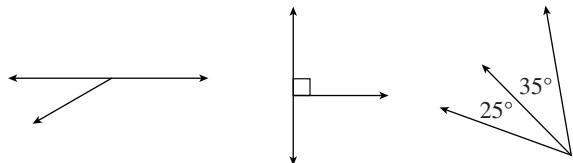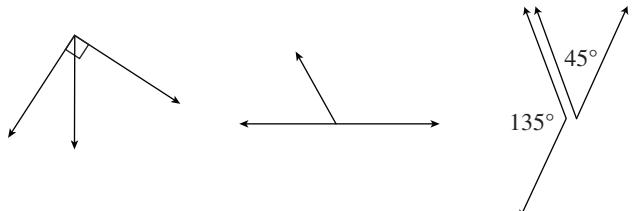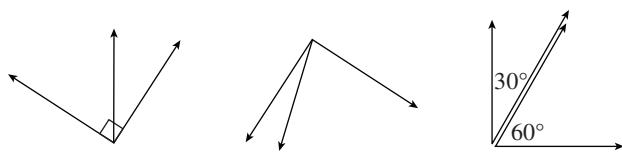
43. A carpenter's square is placed on a board. What is the relationship between ∠1 and ∠2 in the diagram below?

1

2
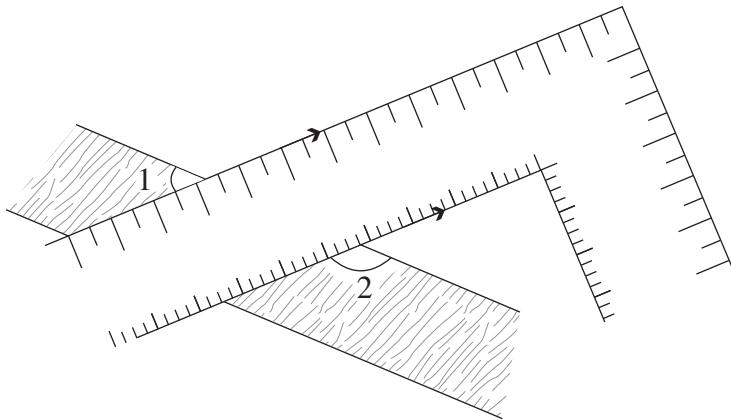
    A. corresponding
*   B. supplementary
    C. complementary
    D. alternate interior

44. What is the measure of ∠BAC?
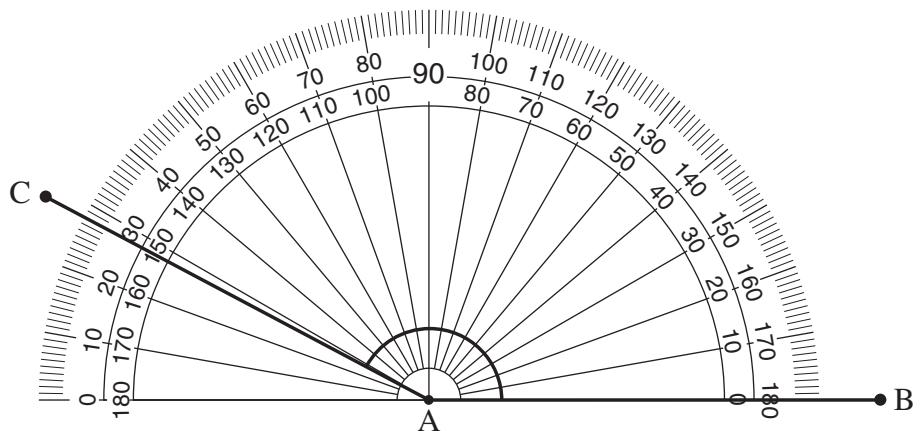
    A.   28°
    B.   32°
    C. 150°
*   D. 152°

45. Rank the following types of angles from the smallest to the greatest measure:

I.	acute
II.	obtuse
III.	reflex
IV.	right
V.	straight

*   A. I, IV, II, V, III
    B. I, IV, V, III, II
    C. III, I, IV, V, II
    D. III, I, V, IV, II

46. A cruise ship travelling parallel to the shoreline turns $25°$ to the right. It continues in this direction before making a sharp right hand turn so that it is now pointing at a $10°$ angle to the shoreline.
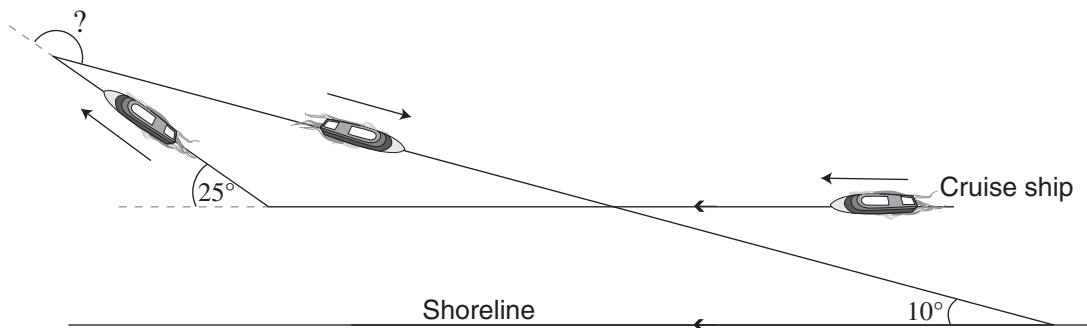
What is the measure, in degrees, of the second turn?

   A. 145
*   B. 165
   C. 325
   D. 345

47. Organize the items below from lowest to highest unit price.

I.	500 g for 89¢
II.	2.2 kg for $3.98
III.	2.0 kg for $3.54

   A. I, III, II
   B. II, I, III
   C. II, III, I
*   D. III, I, II

48. Mrs. Jones has a budget of $330 to purchase 50 calculators for her classes. She must not exceed her budget. She is deciding between two stores:

– **Store 1** sells scientific calculators for $6.45 each.
– **Store 2** sells scientific calculators in boxes of 8 for $49.95 per box.
   They will not sell individual calculators.

Which statement explains where Mrs. Jones should buy the calculators and why?

    A.   Store 1 because the unit price is lower.
    B.   Store 2 because the unit price is lower.
*   C.   Store 1 because she will not go over budget with the purchase of 50 calculators.
    D.   Store 2 because she will have extra calculators for the following school year.

49. The cost of 6 hot dog buns is $2.49 and the cost of 1 dozen tofu wieners is $2.98. Determine the price per serving (1 bun + 1 wiener).

    A. 46¢
    B. 51¢
*   C. 66¢
    D. 91¢

50. Hairstyling scissors originally priced at $119.99 are reduced to $95.99. Calculate the percent decrease in price.

*   A. 20
    B. 24
    C. 25
    D. 80

51. In 2008 the starting wage for a barista in Wyoming was 8.50 USD per hour. At the same period the starting wage for a barista was 5.35 GBP per hour in London, England. Calculate the difference between the two wages. (1.0000 USD = 0.6049 GBP).

*   A. 0.34 USD
    B. 3.15 USD
    C. 5.21 USD
    D. 5.26 USD

52. Farrah is deciding between two jobs.

> Job 1: work in a retail store for $1100 per month.
> Job 2: go tree planting and earn 13¢ per tree planted.

What is the fewest number of trees she would need to plant per month to earn more than the retail store salary?

   A.   85
* B.   1 430
   C.   8 462
   D. 14 300

53. Laurie's time card is shown below. What are her total regular and overtime hours?

Laurie Brown				
	Regular		Overtime	
	h	*m*	*h*	*m*
Sunday				
Monday	8			45
Tuesday	6	30		
Wednesday	5	50		
Thursday	8		1	20
Friday	7	30		
Saturday				
Total				

   A. Regular: 36 h   Overtime: 2 h
   B. Regular: 35 h 50 min   Overtime: 2 h 5 min
* C. Regular: 34.83 h   Overtime: 1 h 65 min
   D. Regular: 33 h 50 min   Overtime: 2.08 h

54. Sean earns $12.40 per hour and is paid time and a half for any hours worked over 40 within one week. One week last month his gross income was $589. How many overtime hours did Sean work?

*   A.   5.0
         B.   7.5
         C. 45.0
         D. 47.5

55. A sales associate earns $8.50 per hour and receives a 1% commission on all sales. The calculation below was used by a payroll clerk to find the gross earnings of an associate who worked 40 hours one week with sales of $6000. Identify where the error was made in the calculation.

$$\underset{\underset{(40)}{\downarrow}}{\overset{I}{}} 8.50 + \underset{\underset{6000}{\downarrow}}{\overset{II}{}}\underset{\underset{(}{\downarrow}}{\overset{III}{}}\underset{\underset{0.1)}{\downarrow}}{\overset{IV}{}}$$

         A. I
         B. II
         C. III
*   D. IV

56. Isaac runs a painting business. He received $12 000 from a client for a job. The job had the following costs:

- supplies $1500
- paint $3200
- 4 employees earning $12/h

It took 32 hours to complete the job. How much money was left for Isaac?

         A. $384
         B. $1536
*   C. $5764
         D. $6236

57. Julie's new employer gives her a choice of two different methods of earning income.

        Method 1: • a wage of $20 per hour for the first 150 hours
                  • $22 per hour for more than 150 hours

        Method 2: • 5% commission on monthly sales up to $25 000
                  • 10% commission on sales greater than $25 000

She worked 173 hours last month and had total sales of $33 000. Identify which method would pay her the most and what her income would be.

*   A. Method 1, $3506
      B. Method 1, $3806
      C. Method 2, $2050
      D. Method 2, $3300

58. An employee has a weekly income of $416.15 and is assigned claim code 1.
    Calculate his total weekly deductions and taxes.

      A. $24.47
      B. $32.65
*   C. $57.12
      D. $95.32

☞   • In the provincial examinations, questions relating to common deductions from income will be limited to:

    – Canadian Pension Plan (CPP) contributions
    – Employment Insurance (EI) premiums
    – income tax (federal and provincial)

  Students are expected to be familiar with the abbreviations CPP and EI.

  • Students will need to know how to determine the deductions from tables or a given percentage. (See Sample B, question 59.)

59. Which factors determine the difference between gross pay and net pay?

I.	tax deductions
II.	CPP
III.	EI
IV.	commission

    A. II only
    B. IV only
    C. II and III only
*   D. I, II and III only

60. Rohit earned $6/h for his first 500 hours of employment. After completing these hours his wage increased to $8/h. What was the percent increase of Rohit's wage?

    A. 25
    B. 30
*   C. 33
    D. 40

You have **Examination Booklet Form A**. In the box above #1 on your **Answer Sheet**, ensure you filled in the bubble as follows.

Exam Booklet Form/ Cahier d'examen   A B C D E F G H

END OF EXAMINATION

Examination Rules

1. The time allotted for this examination is two hours.
   You may, however, take up to 60 minutes of additional time to finish.

2. Answers entered in the Examination Booklet will not be marked.

3. Cheating on an examination will result in a mark of zero. The Ministry of Education considers cheating to have occurred if students break any of the following rules:

   • Students must not be in possession of or have used any secure examination materials prior to the examination session.

   • Students must not communicate with other students during the examination.

   • Students must not give or receive assistance of any kind in answering an examination question during an examination, including allowing their papers to be viewed by others or copying answers from another student's paper.

   • Students must not possess any book, paper or item that might assist in writing an examination, including a dictionary or piece of electronic equipment, that is not specifically authorized for the examination by ministry policy.

   • Students must not copy, plagiarize or present as their own, work done by any other person.

   • Students must immediately follow the invigilator's order to stop writing at the end of the examination time and must not alter an Examination Booklet, Response Booklet or Answer Sheet after the invigilator has asked students to hand in examination papers.

   • Students must not remove any piece of the examination materials from the examination room, including work pages.

4. The use of inappropriate language or content may result in a mark of zero being awarded.

5. Upon completion of the examination, return all examination materials to the supervising invigilator.

APPRENTICESHIP AND WORKPLACE MATHEMATICS 10

DATA PAGES

UNIT CONVERSION

	Common Imperial	**Imperial and SI**	**SI**
Length	1 mile = 1760 yards 1 mile = 5280 feet 1 yard = 3 feet 1 yard = 36 inches 1 foot = 12 inches	1 mile ≈ 1.609 km 1 yard = 0.9144 m 1 foot = 30.48 cm 1 inch = 2.54 cm	1 km = 1000 m 1 m = 100 cm 1 cm = 10 mm
Mass (Weight)	1 ton = 2000 pounds 1 pound = 16 ounces	2.2 pounds ≈ 1 kg 1 pound ≈ 454 g 1 ounce ≈ 28.35 g	1 t = 1000 kg 1 kg = 1000 g
Volume	1 gallon = 4 quarts 1 gallon (UK) ≈ $\frac{6}{5}$ gallons (US) 32 fluid ounces = 1 quart	1.06 quarts (US) ≈ 1 L 0.26 gallons (US) ≈ 1 L 3.52 fluid ounces (UK) ≈ 100 mL 3.38 fluid ounces (US) ≈ 100 mL	
Common Abbreviations	mile = mi yard = yd feet = ' or ft inch = " or in ton = tn pound = lb ounce = oz fluid ounce = fl oz		kilometre = km metre = m centimetre = cm millimetre = mm tonne (metric ton) = t gram = g litre = L millilitre = mL

Temperature
$C = \dfrac{5}{9}(F - 32)$
$F = \dfrac{9}{5}C + 32$

FORMULAE

Trigonometry

(Put your calculator in Degree Mode)
• Right triangles
   Pythagorean Theorem
   $a^2 + b^2 = c^2$
 	
   $\sin A = \dfrac{\text{opposite}}{\text{hypotenuse}}$
 	
   $\cos A = \dfrac{\text{adjacent}}{\text{hypotenuse}}$
 	
   $\tan A = \dfrac{\text{opposite}}{\text{adjacent}}$
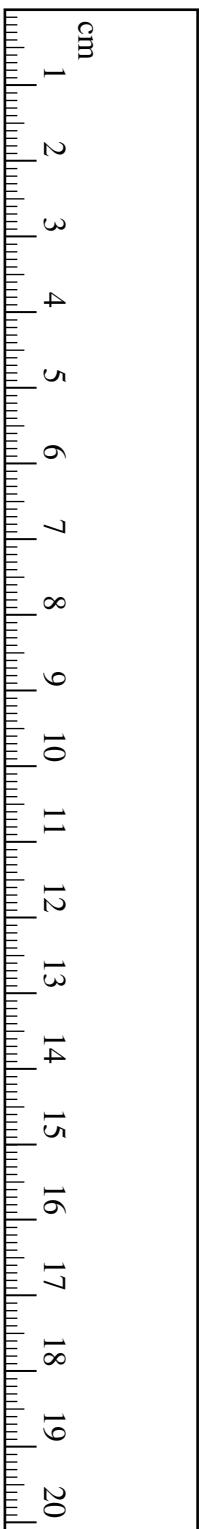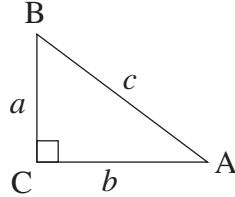
GEOMETRIC FORMULAE

<table>
<tr><td colspan="2" align="center">Key Legend</td></tr>
<tr>
<td>

l = length

w = width

b = base

h = height

s = slant height

r = radius

d = diameter
</td>
<td>

P = perimeter

C = circumference

A = area

SA = surface area

V = volume
</td>
</tr>
</table>

Geometric Figure	**Perimeter**	**Area**
Rectangle	$P = 2l + 2w$ **or** $P = 2(l + w)$	$A = lw$
Triangle	$P = a + b + c$	$A = \dfrac{bh}{2}$
Circle	$C = \pi d$ **or** $C = 2\pi r$	$A = \pi r^2$
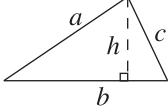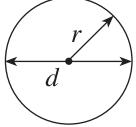
Note: Use the value of π programmed in your calculator rather than the approximation of 3.14.

Inches

Geometric Solid	Surface Area
Cylinder 	$A_{top} = \pi r^2$ $A_{base} = \pi r^2$ $A_{side} = 2\pi rh$ $SA = 2\pi r^2 + 2\pi rh$
Sphere 	$SA = 4\pi r^2$ **or** $SA = \pi d^2$
Cone 	$A_{side} = \pi rs$ $A_{base} = \pi r^2$ $SA = \pi r^2 + \pi rs$
Square-Based Pyramid 	$A_{triangle} = \dfrac{1}{2}bs \;\; \left(\text{for each triangle}\right)$ $A_{base} = b^2$ $SA = 2bs + b^2$
Rectangular Prism 	$SA = wh + wh + lw + lw + lh + lh$ **or** $SA = 2\left(wh + lw + lh\right)$
General Right Prism	$SA =$ the sum of the areas of all the faces
General Right Pyramid	$SA =$ the sum of the areas of all the faces
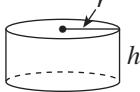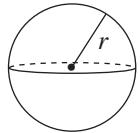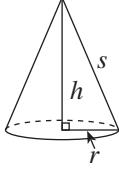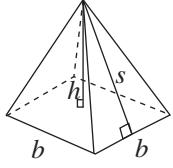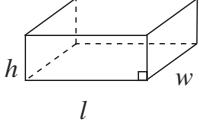
Note: Use the value of π programmed in your calculator rather than the approximation of 3.14.

Pay Rémunération From - De	To - À	CPP RPC	Pay Rémunération From - De	To - À	CPP RPC	Pay Rémunération From - De	To - À	CPP RPC	Pay Rémunération From - De	To - À	CPP RPC
358.11	358.31	14.40	372.66	372.85	15.12	387.20	387.40	15.84	401.75	401.94	16.56
358.32	358.51	14.41	372.86	373.05	15.13	387.41	387.60	15.85	401.95	402.14	16.57
358.52	358.71	14.42	373.06	373.25	15.14	387.61	387.80	15.86	402.15	402.35	16.58
358.72	358.91	14.43	373.26	373.46	15.15	387.81	388.00	15.87	402.36	402.55	16.59
358.92	359.11	14.44	373.47	373.66	15.16	388.01	388.20	15.88	402.56	402.75	16.60
359.12	359.32	14.45	373.67	373.86	15.17	388.21	388.41	15.89	402.76	402.95	16.61
359.33	359.52	14.46	373.87	374.06	15.18	388.42	388.61	15.90	402.96	403.15	16.62
359.53	359.72	14.47	374.07	374.26	15.19	388.62	388.81	15.91	403.16	403.36	16.63
359.73	359.92	14.48	374.27	374.47	15.20	388.82	389.01	15.92	403.37	403.56	16.64
359.93	360.12	14.49	374.48	374.67	15.21	389.02	389.21	15.93	403.57	403.76	16.65
360.13	360.33	14.50	374.68	374.87	15.22	389.22	389.42	15.94	403.77	403.96	16.66
360.34	360.53	14.51	374.88	375.07	15.23	389.43	389.62	15.95	403.97	404.16	16.67
360.54	360.73	14.52	375.08	375.27	15.24	389.63	389.82	15.96	404.17	404.37	16.68
360.74	360.93	14.53	375.28	375.48	15.25	389.83	390.02	15.97	404.38	404.57	16.69
360.94	361.13	14.54	375.49	375.68	15.26	390.03	390.22	15.98	404.58	404.77	16.70
361.14	361.34	14.55	375.69	375.88	15.27	390.23	390.43	15.99	404.78	404.97	16.71
361.35	361.54	14.56	375.89	376.08	15.28	390.44	390.63	16.00	404.98	405.17	16.72
361.55	361.74	14.57	376.09	376.28	15.29	390.64	390.83	16.01	405.18	405.38	16.73
361.75	361.94	14.58	376.29	376.49	15.30	390.84	391.03	16.02	405.39	405.58	16.74
361.95	362.14	14.59	376.50	376.69	15.31	391.04	391.23	16.03	405.59	405.78	16.75
362.15	362.35	14.60	376.70	376.89	15.32	391.24	391.44	16.04	405.79	405.98	16.76
362.36	362.55	14.61	376.90	377.09	15.33	391.45	391.64	16.05	405.99	406.18	16.77
362.56	362.75	14.62	377.10	377.29	15.34	391.65	391.84	16.06	406.19	406.39	16.78
362.76	362.95	14.63	377.30	377.50	15.35	391.85	392.04	16.07	406.40	406.59	16.79
362.96	363.15	14.64	377.51	377.70	15.36	392.05	392.24	16.08	406.60	406.79	16.80
363.16	363.36	14.65	377.71	377.90	15.37	392.25	392.45	16.09	406.80	406.99	16.81
363.37	363.56	14.66	377.91	378.10	15.38	392.46	392.65	16.10	407.00	407.19	16.82
363.57	363.76	14.67	378.11	378.31	15.39	392.66	392.85	16.11	407.20	407.40	16.83
363.77	363.96	14.68	378.32	378.51	15.40	392.86	393.05	16.12	407.41	407.60	16.84
363.97	364.16	14.69	378.52	378.71	15.41	393.06	393.25	16.13	407.61	407.80	16.85
364.17	364.37	14.70	378.72	378.91	15.42	393.26	393.46	16.14	407.81	408.00	16.86
364.38	364.57	14.71	378.92	379.11	15.43	393.47	393.66	16.15	408.01	408.20	16.87
364.58	364.77	14.72	379.12	379.32	15.44	393.67	393.86	16.16	408.21	408.41	16.88
364.78	364.97	14.73	379.33	379.52	15.45	393.87	394.06	16.17	408.42	408.61	16.89
364.98	365.17	14.74	379.53	379.72	15.46	394.07	394.26	16.18	408.62	408.81	16.90
365.18	365.38	14.75	379.73	379.92	15.47	394.27	394.47	16.19	408.82	409.01	16.91
365.39	365.58	14.76	379.93	380.12	15.48	394.48	394.67	16.20	409.02	409.21	16.92
365.59	365.78	14.77	380.13	380.33	15.49	394.68	394.87	16.21	409.22	409.42	16.93
365.79	365.98	14.78	380.34	380.53	15.50	394.88	395.07	16.22	409.43	409.62	16.94
365.99	366.18	14.79	380.54	380.73	15.51	395.08	395.27	16.23	409.63	409.82	16.95
366.19	366.39	14.80	380.74	380.93	15.52	395.28	395.48	16.24	409.83	410.02	16.96
366.40	366.59	14.81	380.94	381.13	15.53	395.49	395.68	16.25	410.03	410.22	16.97
366.60	366.79	14.82	381.14	381.34	15.54	395.69	395.88	16.26	410.23	410.43	16.98
366.80	366.99	14.83	381.35	381.54	15.55	395.89	396.08	16.27	410.44	410.63	16.99
367.00	367.19	14.84	381.55	381.74	15.56	396.09	396.28	16.28	410.64	410.83	17.00
367.20	367.40	14.85	381.75	381.94	15.57	396.29	396.49	16.29	410.84	411.03	17.01
367.41	367.60	14.86	381.95	382.14	15.58	396.50	396.69	16.30	411.04	411.23	17.02
367.61	367.80	14.87	382.15	382.35	15.59	396.70	396.89	16.31	411.24	411.44	17.03
367.81	368.00	14.88	382.36	382.55	15.60	396.90	397.09	16.32	411.45	411.64	17.04
368.01	368.20	14.89	382.56	382.75	15.61	397.10	397.29	16.33	411.65	411.84	17.05
368.21	368.41	14.90	382.76	382.95	15.62	397.30	397.50	16.34	411.85	412.04	17.06
368.42	368.61	14.91	382.96	383.15	15.63	397.51	397.70	16.35	412.05	412.24	17.07
368.62	368.81	14.92	383.16	383.36	15.64	397.71	397.90	16.36	412.25	412.45	17.08
368.82	369.01	14.93	383.37	383.56	15.65	397.91	398.10	16.37	412.46	412.65	17.09
369.02	369.21	14.94	383.57	383.76	15.66	398.11	398.31	16.38	412.66	412.85	17.10
369.22	369.42	14.95	383.77	383.96	15.67	398.32	398.51	16.39	412.86	413.05	17.11
369.43	369.62	14.96	383.97	384.16	15.68	398.52	398.71	16.40	413.06	413.25	17.12
369.63	369.82	14.97	384.17	384.37	15.69	398.72	398.91	16.41	413.26	413.46	17.13
369.83	370.02	14.98	384.38	384.57	15.70	398.92	399.11	16.42	413.47	413.66	17.14
370.03	370.22	14.99	384.58	384.77	15.71	399.12	399.32	16.43	413.67	413.86	17.15
370.23	370.43	15.00	384.78	384.97	15.72	399.33	399.52	16.44	413.87	414.06	17.16
370.44	370.63	15.01	384.98	385.17	15.73	399.53	399.72	16.45	414.07	414.26	17.17
370.64	370.83	15.02	385.18	385.38	15.74	399.73	399.92	16.46	414.27	414.47	17.18
370.84	371.03	15.03	385.39	385.58	15.75	399.93	400.12	16.47	414.48	414.67	17.19
371.04	371.23	15.04	385.59	385.78	15.76	400.13	400.33	16.48	414.68	414.87	17.20
371.24	371.44	15.05	385.79	385.98	15.77	400.34	400.53	16.49	414.88	415.07	17.21
371.45	371.64	15.06	385.99	386.18	15.78	400.54	400.73	16.50	415.08	415.27	17.22
371.65	371.84	15.07	386.19	386.39	15.79	400.74	400.93	16.51	415.28	415.48	17.23
371.85	372.04	15.08	386.40	386.59	15.80	400.94	401.13	16.52	415.49	415.68	17.24
372.05	372.24	15.09	386.60	386.79	15.81	401.14	401.34	16.53	415.69	415.88	17.25
372.25	372.45	15.10	386.80	386.99	15.82	401.35	401.54	16.54	415.89	416.08	17.26
372.46	372.65	15.11	387.00	387.19	15.83	401.55	401.74	16.55	416.09	416.28	17.27

Employee's maximum CPP contribution for the year 2009 is $2,118.60   B-6   La cotisation maximale de l'employé au RPC pour l'année 2009 est de 2 118,60 $

Employment Insurance Premiums

Cotisations à l'assurance-emploi

Insurable Earnings Rémunération assurable		EI premium Cotisation d'AE	Insurable Earnings Rémunération assurable		EI premium Cotisation d'AE	Insurable Earnings Rémunération assurable		EI premium Cotisation d'AE	Insurable Earnings Rémunération assurable		EI premium Cotisation d'AE
From - De	To - À		From - De	To - À		From - De	To - À		From - De	To - À	
333.24 -	333.81	5.77	374.86 -	375.43	6.49	416.48 -	417.05	7.21	458.10 -	458.67	7.93
333.82 -	334.39	5.78	375.44 -	376.01	6.50	417.06 -	417.63	7.22	458.68 -	459.24	7.94
334.40 -	334.97	5.79	376.02 -	376.58	6.51	417.64 -	418.20	7.23	459.25 -	459.82	7.95
334.98 -	335.54	5.80	376.59 -	377.16	6.52	418.21 -	418.78	7.24	459.83 -	460.40	7.96
335.55 -	336.12	5.81	377.17 -	377.74	6.53	418.79 -	419.36	7.25	460.41 -	460.98	7.97
336.13 -	336.70	5.82	377.75 -	378.32	6.54	419.37 -	419.94	7.26	460.99 -	461.56	7.98
336.71 -	337.28	5.83	378.33 -	378.90	6.55	419.95 -	420.52	7.27	461.57 -	462.13	7.99
337.29 -	337.86	5.84	378.91 -	379.47	6.56	420.53 -	421.09	7.28	462.14 -	462.71	8.00
337.87 -	338.43	5.85	379.48 -	380.05	6.57	421.10 -	421.67	7.29	462.72 -	463.29	8.01
338.44 -	339.01	5.86	380.06 -	380.63	6.58	421.68 -	422.25	7.30	463.30 -	463.87	8.02
339.02 -	339.59	5.87	380.64 -	381.21	6.59	422.26 -	422.83	7.31	463.88 -	464.45	8.03
339.60 -	340.17	5.88	381.22 -	381.79	6.60	422.84 -	423.41	7.32	464.46 -	465.02	8.04
340.18 -	340.75	5.89	381.80 -	382.36	6.61	423.42 -	423.98	7.33	465.03 -	465.60	8.05
340.76 -	341.32	5.90	382.37 -	382.94	6.62	423.99 -	424.56	7.34	465.61 -	466.18	8.06
341.33 -	341.90	5.91	382.95 -	383.52	6.63	424.57 -	425.14	7.35	466.19 -	466.76	8.07
341.91 -	342.48	5.92	383.53 -	384.10	6.64	425.15 -	425.72	7.36	466.77 -	467.34	8.08
342.49 -	343.06	5.93	384.11 -	384.68	6.65	425.73 -	426.30	7.37	467.35 -	467.91	8.09
343.07 -	343.64	5.94	384.69 -	385.26	6.66	426.31 -	426.87	7.38	467.92 -	468.49	8.10
343.65 -	344.21	5.95	385.27 -	385.83	6.67	426.88 -	427.45	7.39	468.50 -	469.07	8.11
344.22 -	344.79	5.96	385.84 -	386.41	6.68	427.46 -	428.03	7.40	469.08 -	469.65	8.12
344.80 -	345.37	5.97	386.42 -	386.99	6.69	428.04 -	428.61	7.41	469.66 -	470.23	8.13
345.38 -	345.95	5.98	387.00 -	387.57	6.70	428.62 -	429.19	7.42	470.24 -	470.80	8.14
345.96 -	346.53	5.99	387.58 -	388.15	6.71	429.20 -	429.76	7.43	470.81 -	471.38	8.15
346.54 -	347.10	6.00	388.16 -	388.72	6.72	429.77 -	430.34	7.44	471.39 -	471.96	8.16
347.11 -	347.68	6.01	388.73 -	389.30	6.73	430.35 -	430.92	7.45	471.97 -	472.54	8.17
347.69 -	348.26	6.02	389.31 -	389.88	6.74	430.93 -	431.50	7.46	472.55 -	473.12	8.18
348.27 -	348.84	6.03	389.89 -	390.46	6.75	431.51 -	432.08	7.47	473.13 -	473.69	8.19
348.85 -	349.42	6.04	390.47 -	391.04	6.76	432.09 -	432.65	7.48	473.70 -	474.27	8.20
349.43 -	349.99	6.05	391.05 -	391.61	6.77	432.66 -	433.23	7.49	474.28 -	474.85	8.21
350.00 -	350.57	6.06	391.62 -	392.19	6.78	433.24 -	433.81	7.50	474.86 -	475.43	8.22
350.58 -	351.15	6.07	392.20 -	392.77	6.79	433.82 -	434.39	7.51	475.44 -	476.01	8.23
351.16 -	351.73	6.08	392.78 -	393.35	6.80	434.40 -	434.97	7.52	476.02 -	476.58	8.24
351.74 -	352.31	6.09	393.36 -	393.93	6.81	434.98 -	435.54	7.53	476.59 -	477.16	8.25
352.32 -	352.89	6.10	393.94 -	394.50	6.82	435.55 -	436.12	7.54	477.17 -	477.74	8.26
352.90 -	353.46	6.11	394.51 -	395.08	6.83	436.13 -	436.70	7.55	477.75 -	478.32	8.27
353.47 -	354.04	6.12	395.09 -	395.66	6.84	436.71 -	437.28	7.56	478.33 -	478.90	8.28
354.05 -	354.62	6.13	395.67 -	396.24	6.85	437.29 -	437.86	7.57	478.91 -	479.47	8.29
354.63 -	355.20	6.14	396.25 -	396.82	6.86	437.87 -	438.43	7.58	479.48 -	480.05	8.30
355.21 -	355.78	6.15	396.83 -	397.39	6.87	438.44 -	439.01	7.59	480.06 -	480.63	8.31
355.79 -	356.35	6.16	397.40 -	397.97	6.88	439.02 -	439.59	7.60	480.64 -	481.21	8.32
356.36 -	356.93	6.17	397.98 -	398.55	6.89	439.60 -	440.17	7.61	481.22 -	481.79	8.33
356.94 -	357.51	6.18	398.56 -	399.13	6.90	440.18 -	440.75	7.62	481.80 -	482.36	8.34
357.52 -	358.09	6.19	399.14 -	399.71	6.91	440.76 -	441.32	7.63	482.37 -	482.94	8.35
358.10 -	358.67	6.20	399.72 -	400.28	6.92	441.33 -	441.90	7.64	482.95 -	483.52	8.36
358.68 -	359.24	6.21	400.29 -	400.86	6.93	441.91 -	442.48	7.65	483.53 -	484.10	8.37
359.25 -	359.82	6.22	400.87 -	401.44	6.94	442.49 -	443.06	7.66	484.11 -	484.68	8.38
359.83 -	360.40	6.23	401.45 -	402.02	6.95	443.07 -	443.64	7.67	484.69 -	485.26	8.39
360.41 -	360.98	6.24	402.03 -	402.60	6.96	443.65 -	444.21	7.68	485.27 -	485.83	8.40
360.99 -	361.56	6.25	402.61 -	403.17	6.97	444.22 -	444.79	7.69	485.84 -	486.41	8.41
361.57 -	362.13	6.26	403.18 -	403.75	6.98	444.80 -	445.37	7.70	486.42 -	486.99	8.42
362.14 -	362.71	6.27	403.76 -	404.33	6.99	445.38 -	445.95	7.71	487.00 -	487.57	8.43
362.72 -	363.29	6.28	404.34 -	404.91	7.00	445.96 -	446.53	7.72	487.58 -	488.15	8.44
363.30 -	363.87	6.29	404.92 -	405.49	7.01	446.54 -	447.10	7.73	488.16 -	488.72	8.45
363.88 -	364.45	6.30	405.50 -	406.06	7.02	447.11 -	447.68	7.74	488.73 -	489.30	8.46
364.46 -	365.02	6.31	406.07 -	406.64	7.03	447.69 -	448.26	7.75	489.31 -	489.88	8.47
365.03 -	365.60	6.32	406.65 -	407.22	7.04	448.27 -	448.84	7.76	489.89 -	490.46	8.48
365.61 -	366.18	6.33	407.23 -	407.80	7.05	448.85 -	449.42	7.77	490.47 -	491.04	8.49
366.19 -	366.76	6.34	407.81 -	408.38	7.06	449.43 -	449.99	7.78	491.05 -	491.61	8.50
366.77 -	367.34	6.35	408.39 -	408.95	7.07	450.00 -	450.57	7.79	491.62 -	492.19	8.51
367.35 -	367.91	6.36	408.96 -	409.53	7.08	450.58 -	451.15	7.80	492.20 -	492.77	8.52
367.92 -	368.49	6.37	409.54 -	410.11	7.09	451.16 -	451.73	7.81	492.78 -	493.35	8.53
368.50 -	369.07	6.38	410.12 -	410.69	7.10	451.74 -	452.31	7.82	493.36 -	493.93	8.54
369.08 -	369.65	6.39	410.70 -	411.27	7.11	452.32 -	452.89	7.83	493.94 -	494.50	8.55
369.66 -	370.23	6.40	411.28 -	411.84	7.12	452.90 -	453.46	7.84	494.51 -	495.08	8.56
370.24 -	370.80	6.41	411.85 -	412.42	7.13	453.47 -	454.04	7.85	495.09 -	495.66	8.57
370.81 -	371.38	6.42	412.43 -	413.00	7.14	454.05 -	454.62	7.86	495.67 -	496.24	8.58
371.39 -	371.96	6.43	413.01 -	413.58	7.15	454.63 -	455.20	7.87	496.25 -	496.82	8.59
371.97 -	372.54	6.44	413.59 -	414.16	7.16	455.21 -	455.78	7.88	496.83 -	497.39	8.60
372.55 -	373.12	6.45	414.17 -	414.73	7.17	455.79 -	456.35	7.89	497.40 -	497.97	8.61
373.13 -	373.69	6.46	414.74 -	415.31	7.18	456.36 -	456.93	7.90	497.98 -	498.55	8.62
373.70 -	374.27	6.47	415.32 -	415.89	7.19	456.94 -	457.51	7.91	498.56 -	499.13	8.63
374.28 -	374.85	6.48	415.90 -	416.47	7.20	457.52 -	458.09	7.92	499.14 -	499.71	8.64

Yearly maximum insurable earnings are $42,300
Yearly maximum employee premiums are $731.79
The premium rate for 2009 is 1.73 %

Le maximum annuel de la rémunération assurable est de 42 300 $
La cotisation maximale annuelle de l'employé est de 731,79 $
Le taux de cotisation pour 2009 est de 1,73 %

C-3

Apprenticeship and Workplace Mathematics 10

Federal tax deductions
Effective January 1, 2009
Weekly (52 pay periods a year)
**Also look up the tax deductions
in the provincial table**

Retenues d'impôt fédéral
En vigueur le 1er janvier 2009
Hebdomadaire (52 périodes de paie par année)
**Cherchez aussi les retenues d'impôt
dans la table provinciale**

Pay Rémunération			Federal claim codes/Codes de demande fédéraux										
			0	1	2	3	4	5	6	7	8	9	10
From De	Less than Moins de		Deduct from each pay / Retenez sur chaque paie										
335	-	339	44.65	15.55	12.70	7.00	1.30						
339	-	343	45.20	16.10	13.25	7.55	1.85						
343	-	347	45.80	16.65	13.80	8.10	2.45						
347	-	351	46.35	17.20	14.35	8.65	3.00						
351	-	355	46.90	17.75	14.90	9.25	3.55						
355	-	359	47.45	18.35	15.50	9.80	4.10						
359	-	363	48.00	18.90	16.05	10.35	4.65						
363	-	367	48.60	19.45	16.60	10.90	5.25						
367	-	371	49.15	20.00	17.15	11.45	5.80	.10					
371	-	375	49.70	20.55	17.70	12.05	6.35	.65					
375	-	379	50.25	21.15	18.30	12.60	6.90	1.20					
379	-	383	50.80	21.70	18.85	13.15	7.45	1.80					
383	-	387	51.40	22.25	19.40	13.70	8.00	2.35					
387	-	391	51.95	22.80	19.95	14.25	8.60	2.90					
391	-	395	52.50	23.35	20.50	14.85	9.15	3.45					
395	-	399	53.05	23.95	21.10	15.40	9.70	4.00					
399	-	403	53.60	24.50	21.65	15.95	10.25	4.60					
403	-	407	54.20	25.05	22.20	16.50	10.80	5.15					
407	-	411	54.75	25.60	22.75	17.05	11.40	5.70					
411	-	415	55.30	26.15	23.30	17.65	11.95	6.25	.55				
415	-	419	55.85	26.75	23.90	18.20	12.50	6.80	1.15				
419	-	423	56.40	27.30	24.45	18.75	13.05	7.40	1.70				
423	-	427	57.00	27.85	25.00	19.30	13.60	7.95	2.25				
427	-	431	57.55	28.40	25.55	19.85	14.20	8.50	2.80				
431	-	435	58.10	28.95	26.10	20.45	14.75	9.05	3.35				
435	-	439	58.65	29.50	26.70	21.00	15.30	9.60	3.95				
439	-	443	59.20	30.10	27.25	21.55	15.85	10.20	4.50				
443	-	447	59.80	30.65	27.80	22.10	16.40	10.75	5.05				
447	-	451	60.35	31.20	28.35	22.65	17.00	11.30	5.60				
451	-	455	60.90	31.75	28.90	23.25	17.55	11.85	6.15	.50			
455	-	459	61.45	32.30	29.50	23.80	18.10	12.40	6.75	1.05			
459	-	463	62.00	32.90	30.05	24.35	18.65	12.95	7.30	1.60			
463	-	467	62.60	33.45	30.60	24.90	19.20	13.55	7.85	2.15			
467	-	471	63.15	34.00	31.15	25.45	19.80	14.10	8.40	2.70			
471	-	475	63.70	34.55	31.70	26.05	20.35	14.65	8.95	3.30			
475	-	479	64.25	35.10	32.30	26.60	20.90	15.20	9.55	3.85			
479	-	483	64.80	35.70	32.85	27.15	21.45	15.75	10.10	4.40			
483	-	487	65.40	36.25	33.40	27.70	22.00	16.35	10.65	4.95			
487	-	491	65.95	36.80	33.95	28.25	22.60	16.90	11.20	5.50			
491	-	495	66.50	37.35	34.50	28.85	23.15	17.45	11.75	6.10	.40		
495	-	499	67.05	37.90	35.10	29.40	23.70	18.00	12.35	6.65	.95		
499	-	503	67.60	38.50	35.65	29.95	24.25	18.55	12.90	7.20	1.50		
503	-	507	68.20	39.05	36.20	30.50	24.80	19.15	13.45	7.75	2.05		
507	-	511	68.75	39.60	36.75	31.05	25.40	19.70	14.00	8.30	2.65		
511	-	515	69.30	40.15	37.30	31.65	25.95	20.25	14.55	8.90	3.20		
515	-	519	69.85	40.70	37.90	32.20	26.50	20.80	15.15	9.45	3.75		
519	-	523	70.40	41.30	38.45	32.75	27.05	21.35	15.70	10.00	4.30		
523	-	527	71.00	41.85	39.00	33.30	27.60	21.95	16.25	10.55	4.85		
527	-	531	71.55	42.40	39.55	33.85	28.20	22.50	16.80	11.10	5.45		
531	-	535	72.10	42.95	40.10	34.45	28.75	23.05	17.35	11.70	6.00	.30	
535	-	539	72.65	43.50	40.70	35.00	29.30	23.60	17.90	12.25	6.55	.85	
539	-	543	73.20	44.10	41.25	35.55	29.85	24.15	18.50	12.80	7.10	1.40	
543	-	547	73.80	44.65	41.80	36.10	30.40	24.75	19.05	13.35	7.65	2.00	
547	-	551	74.35	45.20	42.35	36.65	31.00	25.30	19.60	13.90	8.25	2.55	
551	-	555	74.90	45.75	42.90	37.25	31.55	25.85	20.15	14.50	8.80	3.10	

This table is available on TOD   **D-2**   **Vous pouvez obtenir cette table sur TSD**

British Columbia provincial tax deductions
Effective January 1, 2009
Weekly (52 pay periods a year)
Also look up the tax deductions
in the federal table

Retenues d'impôt provincial de la Colombie-Britannique
En vigueur le 1er janvier 2009
Hebdomadaire (52 périodes de paie par année)
Cherchez aussi les retenues d'impôt
dans la table fédérale

Pay / Rémunération		Provincial claim codes/Codes de demande provinciaux										
		0	1	2	3	4	5	6	7	8	9	10
From / De	Less than / Moins de	Deduct from each pay / Retenez sur chaque paie										
	343	*	.00									
343 -	345	9.30	.20									
345 -	347	9.45	.35									
347 -	349	9.60	.50									
349 -	351	9.80	.65									
351 -	353	9.95	.80									
353 -	355	10.10	.95									
355 -	357	10.25	1.15	.10								
357 -	359	10.40	1.30	.25								
359 -	361	10.55	1.45	.40								
361 -	363	10.75	1.60	.60								
363 -	365	10.90	1.75	.75								
365 -	367	11.05	1.90	.90								
367 -	369	11.20	2.10	1.05								
369 -	371	11.35	2.25	1.20								
371 -	373	11.50	2.40	1.35								
373 -	375	11.70	2.55	1.55								
375 -	377	11.85	2.70	1.70								
377 -	379	12.00	2.90	1.85								
379 -	381	12.15	3.05	2.00								
381 -	383	12.30	3.20	2.15	.10							
383 -	385	12.45	3.35	2.30	.25							
385 -	387	12.65	3.50	2.50	.45							
387 -	389	12.80	3.65	2.65	.60							
389 -	391	12.95	3.85	2.80	.75							
391 -	393	13.10	4.00	2.95	.90							
393 -	395	13.25	4.15	3.10	1.05							
395 -	397	13.40	4.30	3.30	1.20							
397 -	399	13.60	4.45	3.45	1.40							
399 -	401	13.75	4.60	3.60	1.55							
401 -	403	13.90	4.80	3.75	1.70							
403 -	405	14.05	4.95	3.90	1.85							
405 -	407	14.20	5.10	4.05	2.00							
407 -	409	14.35	5.25	4.25	2.15	.10						
409 -	411	14.55	5.40	4.40	2.35	.30						
411 -	413	14.70	5.55	4.55	2.50	.45						
413 -	415	14.85	5.75	4.70	2.65	.60						
415 -	417	15.00	5.90	4.85	2.80	.75						
417 -	419	15.15	6.05	5.00	2.95	.90						
419 -	421	15.30	6.20	5.20	3.10	1.05						
421 -	423	15.50	6.35	5.35	3.30	1.25						
423 -	425	15.65	6.50	5.50	3.45	1.40						
425 -	427	15.80	6.70	5.65	3.60	1.55						
427 -	429	15.95	6.85	5.80	3.75	1.70						
429 -	431	16.10	7.00	5.95	3.90	1.85						
431 -	433	16.25	7.15	6.15	4.10	2.00						
433 -	435	16.45	7.30	6.30	4.25	2.20	.15					
435 -	437	16.60	7.45	6.45	4.40	2.35	.30					
437 -	439	16.75	7.65	6.60	4.55	2.50	.45					
439 -	441	16.90	7.80	6.75	4.70	2.65	.60					
441 -	443	17.05	7.95	6.90	4.85	2.80	.75					
443 -	445	17.20	8.10	7.10	5.05	2.95	.90					
445 -	447	17.40	8.25	7.25	5.20	3.15	1.10					
447 -	449	17.55	8.40	7.40	5.35	3.30	1.25					
449 -	451	17.70	8.60	7.55	5.50	3.45	1.40					

*You normally use claim code "0" only for non-resident employees. However, if you have non-resident employees who earn less than the minimum amount shown in the "Pay" column, you may not be able to use these tables. Instead, refer to the "Step-by-step calculation of tax deductions" in Section "A" of this publication.

*Le code de demande «0» est normalement utilisé seulement pour les non-résidents. Cependant, si la rémunération de votre employé non résidant est inférieure au montant minimum indiqué dans la colonne «Rémunération», vous ne pourrez peut-être pas utiliser ces tables. Reportez-vous alors au «Calcul des retenues d'impôt, étape par étape» dans la section «A» de cette publication.

This table is available on TOD   E-1   **Vous pouvez obtenir cette table sur TSD**

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