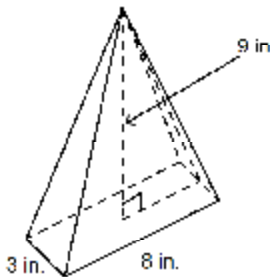


Midterm Review Package**Multiple Choice**

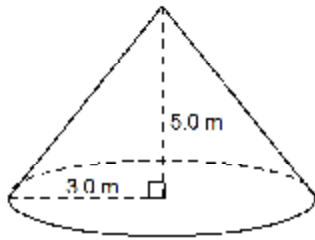
Identify the choice that best completes the statement or answers the question.

- Convert 7 yd. to inches.
A) 21 in. B) 252 in. C) 43 in. D) 84 in.
- Convert 12 565 ft. to miles, yards, and feet.
A) 6 mi. 167 yd. 1 ft. B) 2 mi. 55 yd. 25 ft. C) 2 mi. 668 yd. 1 ft. D) 6 mi. 668 yd. 1 ft.
- A map of Alberta has a scale of 1:1 505 000. The distance on the map between Calgary and Red Deer is $3\frac{1}{4}$ in.
What is this distance to the nearest mile?
A) 232 mi. B) 77 mi. C) 308 mi. D) 26 mi.
- Which referent could you use for 1 km?
A) The distance equal to $2\frac{1}{2}$ laps on an oval running track B) The length of an iPod C) The length of a snowboard D) The length of your arm span
- Which SI unit is most appropriate for measuring the width of your desk?
A) Kilometres B) Centimetres C) Metres D) Millimetres
- A penalty box on a soccer field measures 44 yd. by 18 yd. What are these dimensions to the nearest tenth of a metre?
A) 39.6 m by 16.2 m B) 47.7 m by 16.2 m C) 39.6 m by 17.6 m D) 47.7 m by 17.6 m
- Convert 165 cm to feet and the nearest inch.
A) 5 ft. 8 in. B) 6 ft. 6 in. C) 5 ft. 4 in. D) 5 ft. 6 in.
- Quentin is 5 ft. 1 in. tall. What is his height to the nearest centimetre?
A) 148 cm B) 163 cm C) 153 cm D) 151 cm
- The surface area of a right cone is 400.2 m^2 . The radius of the cone is 6.0 m. Determine the height of the cone to the nearest metre.
A) 14 m B) 16 m C) 15 m D) 13 m
- Calculate the volume of this right rectangular pyramid to the nearest cubic inch.

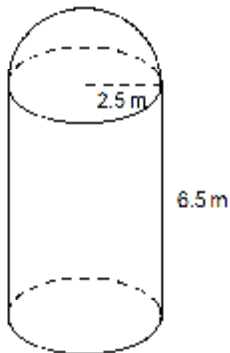


- A) 216 cubic inches B) 72 cubic inches C) 64 cubic inches D) 78 cubic inches

11. Calculate the volume of this right cone to the nearest tenth of a cubic metre.

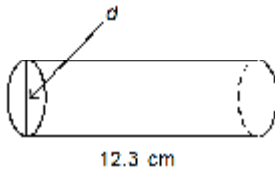


- A) 141.4 m³ B) 47.1 m³ C) 49.3 m³ D) 55.0 m³
12. The radius of a volleyball is approximately 11 cm. Determine the surface area of a volleyball to the nearest square centimetre.
A) 6082 cm² B) 1521 cm² C) 380 cm² D) 5575 cm²
13. A hemisphere has radius 11.6 cm. What is the surface area of the hemisphere to the nearest tenth of a square centimetre?
A) 1268.2 cm² B) 3269.1 cm² C) 918.4 cm² D) 845.5 cm²
14. A hemisphere has radius 11.4 cm. What is the volume of the hemisphere to the nearest tenth of a cubic centimetre?
A) 6205.9 cm³ B) 3102.9 cm³ C) 1633.1 cm³ D) 1224.8 cm³
15. A flat basketball is inflated using a hand pump. The pump inflates the ball at a rate of 230 cm³ per pump, to a diameter of 23.5 cm. How many pumps are required to inflate the ball?
A) 27 pumps B) 28 pumps C) 30 pumps D) 29 pumps
16. Determine the surface area of this composite object, which is a right cylinder and a hemisphere, to the nearest tenth of a square metre.

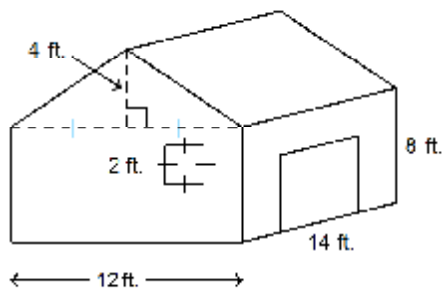


- A) 200.3 m² B) 180.6 m² C) 141.4 m² D) 161.0 m²

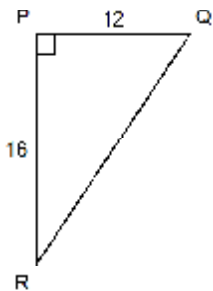
17. The curved surface area of a cylindrical pipe is 60.1 cm^2 . Calculate the diameter of the pipe, d , to the nearest tenth of a centimetre.



- A) 1.2 cm B) 0.8 cm C) 1.6 cm D) 2.5 cm
18. A barn is a composite object formed by a right rectangular prism with a right triangular prism as its roof. The square window on the barn has side length 2 ft. Farmer Fred wants to paint the entire surface of his barn, including the door, but not the window. Determine the surface area to be painted to the nearest square foot.

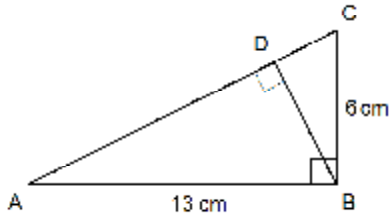


- A) 666 square feet B) 460 square feet C) 662 square feet D) 614 square feet
19. Determine $\tan Q$ and $\tan R$.

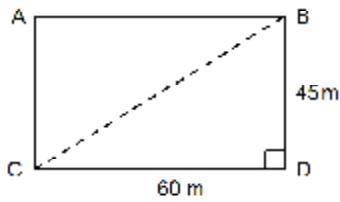


- A) $\tan Q = \sqrt{0.428571}$; $\tan R = 0.75$ B) $\tan Q = \sqrt{1.3}$; $\tan R = 0.75$ C) $\tan Q = \sqrt{1.3}$; $\tan R = \sqrt{0.571428}$ D) $\tan Q = 0.75$; $\tan R = \sqrt{1.3}$
20. Calculate the angle of inclination, to the nearest tenth of a degree, of a road with a grade of 22%.
- A) 77.3° B) 77.6° C) 12.4° D) 12.7°

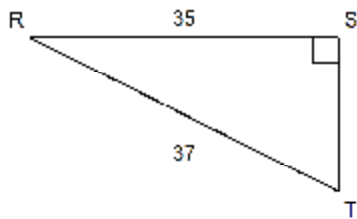
21. Determine the measure of $\angle DBC$ to the nearest tenth of a degree.



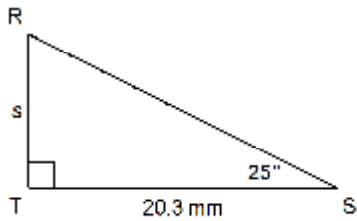
- A) 27.5° B) 24.8° C) 65.2° D) 62.5°
22. Rhonda walked diagonally across a rectangular playground with dimensions 60 m by 45 m. She started at point C. Determine the angle, to the nearest degree, between her path and the longest side of the playground.



- A) 37° B) 41° C) 53° D) 49°
23. Determine the tangent ratio for $\angle T$.

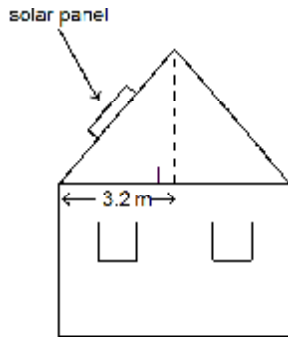


- A) $\frac{12}{35}$ B) $\frac{37}{35}$ C) $\frac{35}{37}$ D) $\frac{35}{12}$
24. Determine the length of side s to the nearest tenth of a millimetre.

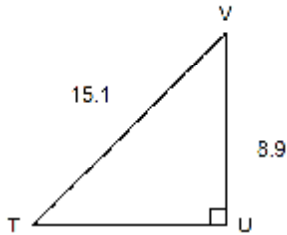


- A) 18.4 mm B) 43.5 mm C) 8.6 mm D) 9.5 mm

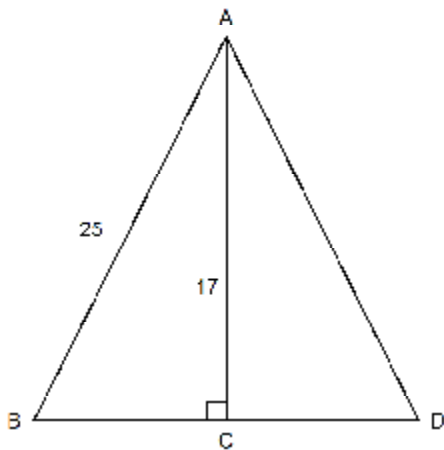
25. The angle of inclination of a solar panel on the roof of a cottage is 57° . Determine the height of the roof, to the nearest tenth of a metre.



- A) 3.8 m B) 4.9 m C) 2.1 m D) 5.9 m
26. A helicopter is hovering 200 m above a road. A car stopped on the side of the road is 300 m from the helicopter. What is the angle of elevation of the helicopter measured from the car, to the nearest degree?
- A) 56° B) 48° C) 42° D) 34°
27. Determine the measure of $\angle V$ to the nearest tenth of a degree.

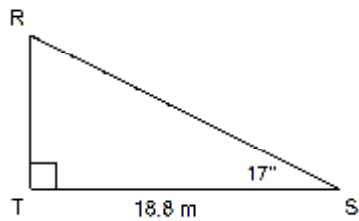


- A) 59.5° B) 36.1° C) 30.5° D) 53.9°
28. Determine the measure of $\angle B$ to the nearest tenth of a degree.

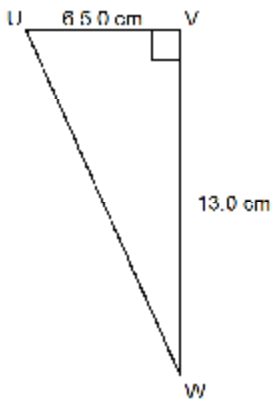


- A) 94.3° B) 34.2° C) 42.8° D) 47.2°

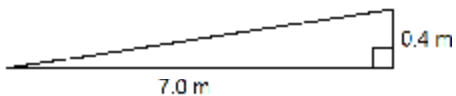
29. Determine the length of RS to the nearest tenth of a metre.



- A) 19.7 m B) 5.7 m C) 18.0 m D) 64.3 m
30. A ladder is 8.0 m long. It leans against a wall. The angle of inclination of the ladder is 72° . To the nearest tenth of a metre, how far from the wall is the base of the ladder?
- A) 2.6 m B) 7.6 m C) 25.9 m D) 2.5 m
31. Solve this right triangle. Give the measures to the nearest tenth.

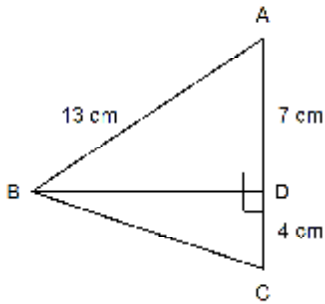


- A) $\angle U = 26.6^\circ$; $\angle W = 63.4^\circ$; $UW = 14.5$ cm B) $\angle U = 63.4^\circ$; $\angle W = 26.6^\circ$; $UW = 14.5$ cm
 C) $\angle U = 63.4^\circ$; $\angle W = 26.6^\circ$; $UW = 29.1$ cm D) $\angle U = 26.6^\circ$; $\angle W = 63.4^\circ$; $UW = 29.1$ cm
32. An architect draws this diagram of a wheelchair entrance ramp for a building. Determine the angle of inclination of the ramp to the nearest tenth of a degree.

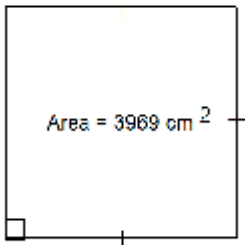


- A) 86.7° B) 29.7° C) 3.3° D) 5.1°

33. Calculate the measure of $\angle ABC$ to the nearest tenth of a degree.

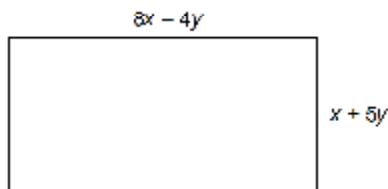


- A) 47.7° B) 102.5° C) 77.5° D) 52.6°
34. Determine the greatest common factor of 84, 210, and 336.
A) 14 B) 1680 C) 21 D) 42
35. Determine the least common multiple of 48, 72, and 108.
A) 432 B) 216 C) 31 104 D) 12
36. Determine the cube root of 42 875.
A) 1225 B) 4763.9 C) 207.1 D) 35
37. Determine the perfect square whole number closest to 7293.
A) 7292 B) 7225 C) 6859 D) 7396
38. Determine the side length of this square.



- A) 63 cm B) 15.83 cm C) 992.25 cm D) 441 cm
39. Factor the trinomial $-33b^2 + 99b + 77$.
A) $-11(3b^2 - 9b + 7)$ B) $-33(b^2 - 3b - 7)$ C) $-11(3b^2 - 9b - 7)$ D) $33(-b^2 + 27b + 7)$
40. Factor the trinomial $-42x^5y^6 - 24x^4y^5 - 54x^3y^7$.
A) $6x^4y^5(-7xy - 4 - 9y^2)$ B) $-6x^3y^5(7x^2y + 4x + 9y^2)$ C) $-3x^3y^5(14x^2y + 8x + 18y^2)$
D) $-6x^3(7x^2y^6 + 4xy^5 + 9y^7)$
41. Which of the following trinomials can be represented by a rectangle? Use algebra tiles to check.
A) $y^2 + 3y + 12$ B) $y^2 + 12y + 5$ C) $y^2 + 8y + 15$ D) $y^2 + 14y + 3$
42. Expand and simplify: $(p + 3)(p - 7)$
A) $p^2 - 4p - 21$ B) $p^2 - 10p - 21$ C) $p^2 + 10p - 21$ D) $p^2 + 4p - 21$

43. Factor: $v^2 - 13v + 36$
 A) $(v+3)(v+12)$ B) $(v-3)(v-12)$ C) $(v-4)(v-9)$ D) $(v+4)(v+9)$
44. Factor: $-24 - 2x + x^2$
 A) $(6+x)(-4+x)$ B) $(3+x)(-8+x)$ C) $(-3+x)(8+x)$ D) $(-6+x)(4+x)$
45. Factor: $-4d^2 - 28d + 240$
 A) $-4(d+3)(d-20)$ B) $-4(d+5)(d-12)$ C) $-4(d-3)(d+20)$ D) $-4(d-5)(d+12)$
46. Factor: $7n^2 + 104n - 15$
 A) $(7n-1)(n+15)$ B) $(7n+1)(n-15)$ C) $(7n+15)(n-1)$ D) $(7n-15)(n+1)$
47. Expand and simplify: $(5m-3n)^2$
 A) $25m^2 - 9n^2$ B) $25m^2 - 15mn + 9n^2$ C) $25m^2 - 30mn + 9n^2$ D) $25m^2 + 9n^2$
48. Expand and simplify: $(4d-1)(5d^2+12d-3)$
 A) $20d^3 + 53d^2 + 3$ B) $20d^3 + 48d^2 - 12d + 3$ C) $20d^3 + 43d^2 - 24d + 3$ D) $20d^3 + 43d^2 + 3$
49. Which polynomial, written in simplified form, represents the area of this rectangle?



- A) $8x^2 - 36xy - 20y^2$ B) $8x^2 + 22xy - 20y^2$ C) $16x^2 + 72xy - 40y^2$ D) $8x^2 + 36xy - 20y^2$
50. Expand and simplify: $(2x^2 + 5x - 6)(5x^2 - 2x + 3)$
 A) $10x^4 + 21x^3 - 34x^2 + 27x - 18$ B) $10x^4 + 21x^3 - 34x^2 - 3x + 18$ C) $10x^4 + 21x^3 - 24x^2 + 27x + 18$
 D) $10x^4 - 29x^3 - 34x^2 + 27x - 18$
51. Expand and simplify: $(3c+2)(2c-7) + 3(-2c+1)(7c-5)$
 A) $-36c^2 + 8c - 29$ B) $-36c^2 + 34c - 29$ C) $-36c^2 - 8c - 19$ D) $-36c^2 - 8c - 29$
52. Factor: $16p^2 - 81q^2$
 A) $(4p-9q)^2$ B) $(4p+9q)^2$ C) $(16p-9q)(p-9q)$ D) $(4p+9q)(4p-9q)$
53. Identify the radicand of $\sqrt[6]{4^8}$.
 A) 4 B) 4^8 C) 6 D) 8
54. Evaluate $\sqrt[3]{-64}$.
 A) -4 B) impossible C) -12.8 D) 4
55. Write an equivalent form of $\frac{4}{9}$ as a square root.
 A) $\sqrt{\frac{16}{18}}$ B) $\sqrt[3]{\frac{64}{729}}$ C) $\sqrt{\frac{8}{81}}$ D) $\sqrt{\frac{16}{81}}$

56. Order these numbers from least to greatest: $\sqrt[3]{75}$, $\sqrt{14}$, $\sqrt[3]{100}$, $\sqrt{17}$, $\sqrt[3]{30}$
 A) $\sqrt[3]{75}$, $\sqrt[3]{100}$, $\sqrt{14}$, $\sqrt[3]{30}$, $\sqrt{17}$ B) $\sqrt[3]{30}$, $\sqrt{14}$, $\sqrt{17}$, $\sqrt[3]{75}$, $\sqrt[3]{100}$ C) $\sqrt[3]{100}$, $\sqrt[3]{30}$, $\sqrt{14}$, $\sqrt{17}$, $\sqrt[3]{75}$
 D) $\sqrt{17}$, $\sqrt[3]{75}$, $\sqrt[3]{100}$, $\sqrt{14}$, $\sqrt[3]{30}$

57. To which set(s) of numbers does $-\sqrt{25}$ belong?

I	Natural
II	Integer
III	Rational
IV	Irrational

- A) II and III only B) III only C) I, II and III only D) IV only

58. Write $\sqrt[3]{80}$ in simplest form.

- A) $10\sqrt[3]{2}$ B) $2\sqrt[3]{10}$ C) $8\sqrt[3]{10}$ D) $4\sqrt[3]{5}$

59. Write $3^4\sqrt{2}$ as an entire radical.

- A) $\sqrt[4]{48}$ B) $\sqrt[4]{18}$ C) $\sqrt[4]{162}$ D) $\sqrt[4]{36}$

60. Write $7\sqrt{14}$ as an entire radical.

- A) $\sqrt{9604}$ B) $\sqrt{98}$ C) $\sqrt{686}$ D) $\sqrt{1372}$

61. Evaluate $(-27)^{\frac{1}{3}}$ without using a calculator.

- A) -3 B) 3 C) -9 D) does not exist

62. Evaluate $\left(\frac{125}{8}\right)^{\frac{4}{3}}$.

- A) $\frac{625}{4}$ B) 7.858 958... C) $\frac{625}{16}$ D) $\frac{625}{8}$

63. Arrange these numbers in order from greatest to least.

$$9^{\frac{2}{3}}, \sqrt[3]{9}, 9^{\frac{1}{2}}, \sqrt{9^3}, 9^{1.2}$$

- A) $\sqrt[3]{9}, \sqrt{9^3}, 9^{1.2}, 9^{\frac{2}{3}}, 9^{\frac{1}{2}}$ B) $\sqrt{9^3}, 9^{1.2}, 9^{\frac{2}{3}}, 9^{\frac{1}{2}}, \sqrt[3]{9}$ C) $\sqrt{9^3}, 9^{1.2}, \sqrt[3]{9}, 9^{\frac{2}{3}}, 9^{\frac{1}{2}}$ D) $9^{\frac{2}{3}}, 9^{\frac{1}{2}}, \sqrt[3]{9}, \sqrt{9^3}, 9^{1.2}$

64. Evaluate $64^{-\frac{4}{3}}$ without using a calculator.

- A) $\frac{1}{256}$ B) $\frac{3}{256}$ C) $-\frac{1}{256}$ D) -256

65. Which power with a negative exponent is equivalent to $\frac{125}{512}$?

- A) $\left(\frac{8}{5}\right)^{-3}$ B) $\left(\frac{5}{8}\right)^{-2}$ C) $\left(\frac{8}{5}\right)^{-2}$ D) $\left(\frac{5}{8}\right)^{-3}$

66. Given that $6^{10} = 60\,466\,176$, what is 6^{-10} ?

- A) -6 B) $-\frac{1}{6}$ C) $-\frac{1}{60\,466\,176}$ D) $\frac{1}{60\,466\,176}$

67. Simplify $(64a^{12}b^{15})^{\frac{2}{3}}$.

- A) $16a^8b^{10}$ B) $16a^{18}b^{10}$ C) $64a^8b^{10}$ D) $16a^8b^{25}$

68. Simplify $\left(\frac{36x^4y^3}{4x^8y^{-1}}\right)^{\frac{1}{2}}$.

- A) $3x^2y^2$ B) $\frac{3y^2}{x^2}$ C) $\frac{3y}{x^2}$ D) $\frac{3y^2}{x^6}$

69. Evaluate $(a^{-4}b^{-3})(a^3b^{-4})$ for $a = -1$ and $b = 3$.

- A) $-\frac{1}{2187}$ B) $\frac{1}{2187}$ C) $531\,441$ D) -2187

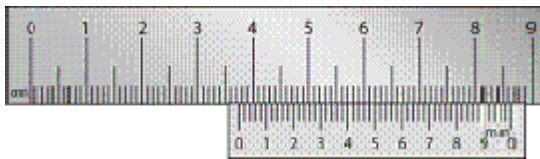
70. What is Canada's official measurement system?

- A) avoirdupois system B) imperial system C) SI system D) US system

71. The basic unit of length in the SI system is the

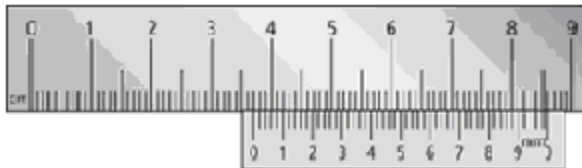
- A) centimetre B) kilometre C) metre D) millimetre

72. The reading shown on the caliper image below is



- A) 34.66 mm B) 36.46 mm C) 37.46 mm D) 40.26 mm

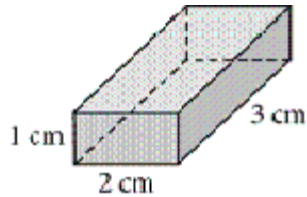
73. What measurement is shown on the imperial caliper?



- A) 92.00 in. B) 76.00 in. C) 40.00 in. D) 37.00 in.

74. It is 851 km from Whitehorse to Inuvik. How long would it take to fly from Whitehorse to Inuvik in a de Havilland Beaver at a speed of 143 mph, if you did not have to stop to refuel?
A) 3.7 h B) 6.0 h C) 16.8 h D) 27.0 h

75. Calculate the surface area of the right prism.



- A) 6 cm^2 B) 22 cm^2 C) 28 cm^2 D) 36 cm^2
76. Evaluate $\tan 45^\circ$.
A) -1 B) 0 C) 1 D) undefined
77. Choose the correct formula for the cosine ratio of $\angle A$.
A) $\cos A = \frac{\text{length of side opposite } \angle A}{\text{length of side adjacent to } \angle A}$ B) $\cos A = \frac{\text{length of hypotenuse}}{\text{length of side adjacent to } \angle A}$
C) $\cos A = \frac{\text{length of side opposite } \angle A}{\text{length of hypotenuse}}$ D) $\cos A = \frac{\text{length of side adjacent to } \angle A}{\text{length of hypotenuse}}$
78. Evaluate $\cos 11^\circ$, to four decimal places.
A) 0.9816 B) 0.1944 C) 0.1908 D) 0.0044
79. Evaluate 0.1^4 .
A) 0.4 B) 0.01 C) 0.001 D) 0.0001
80. What is $\frac{4^4}{2^6 - 4}$?
A) $\frac{64}{17}$ B) 4 C) -2 D) $\frac{64}{15}$
81. What is the next number in the sequence $3^3, 3^2, 3^1, 3^0, \dots$?
A) -1 B) 3^{-2} C) $\frac{1}{3}$ D) 1
82. Which power is equivalent to $\sqrt[4]{160^5}$?
A) $160^{\frac{5}{4}}$ B) $160^{\frac{4}{5}}$ C) $\frac{1}{160^{\frac{5}{4}}}$ D) $\frac{1}{160^{\frac{4}{5}}}$
83. Simplify $[(5^{\frac{1}{3}})^{\frac{3}{2}}]^{\frac{4}{3}}$.
A) 25 B) $5^{\frac{3}{2}}$ C) $\sqrt[3]{25}$ D) $\sqrt[12]{5^{18}}$

84. Order these irrational numbers from least to greatest: $3\sqrt{18}$, $2\sqrt{30}$, $\sqrt[3]{84}$, $4\sqrt{8}$.
 A) $4\sqrt{8}$, $3\sqrt{18}$, $2\sqrt{30}$, $\sqrt[3]{84}$ B) $2\sqrt{30}$, $\sqrt[3]{84}$, $4\sqrt{8}$, $3\sqrt{18}$ C) $\sqrt[3]{84}$, $4\sqrt{8}$, $2\sqrt{30}$, $3\sqrt{18}$ D) $\sqrt[3]{84}$, $2\sqrt{30}$, $4\sqrt{8}$, $3\sqrt{18}$
85. Which expression is an example of a difference of squares?
 A) $x^2 - 21$ B) $4x + 16$ C) $9x - 64$ D) $25x^2 - 81$
86. Which value of k makes the trinomial $x^2 + 12x + k$ a perfect square?
 A) 12 B) 144 C) 36 D) 18
87. Which expression is equal to $(a - b)^2$?
 A) $a^2 - ab + b^2$ B) $a^2 - 2ab + b^2$ C) $a^2 + ab + b^2$ D) $a^2 + 2ab + b^2$
88. Which of the following pairs of integers has a product of 33 and a sum of 14?
 A) 11 and -3 B) -11 and 3 C) 11 and 3 D) -11 and -3
89. Which of the following pairs of integers has a product of 63 and a sum of -16?
 A) 7 and 9 B) 7 and -9 C) -7 and -9 D) -7 and 9
90. Which of the following expressions cannot be factored?
 A) $3x^2 - 13x - 10$ B) $2x^2 + 9x + 10$ C) $2x^2 + x - 10$ D) $x^2 - 3x + 10$
91. What is the volume of a circular pool with a diameter of 10 m and a depth of 5 m?
 A) 47 m^3 B) 157 m^3 C) 393 m^3 D) 1571 m^3
92. Simplify $\frac{(r^2)^3}{r^{-4}}$ using positive exponents only.
 A) r^{24} B) r^{10} C) r^2 D) r
93. Which expression has the largest value?
 A) 4^{-1} B) 3^{-3} C) $\left(\frac{3}{4}\right)^{-2}$ D) $\left(\frac{1}{4}\right)^{-3}$
94. What is the product of $(x + 3)$ and $(x + 4)$?
 A) $x^2 + 7x + 12$ B) $x^2 + 12x + 7$ C) $x^2 + 12$ D) $x^2 + 7$
95. The expression $\frac{x^2 - 9}{x^4 - 18x^2 + 81}$ after simplifying fully is
 A) $\frac{1}{(x+3)(x-3)}$ B) $(x+3)(x-3)$ C) $\frac{(x+3)(x-3)}{(x^2-9)^2}$ D) $\frac{(x^2-9)^2}{(x+3)(x-3)}$
96. Choose the factored form of $yx + yz + xw + zw$.
 A) $(y - w)(x - z)$ B) $(x - w)(z - y)$ C) $(x + y)(z + w)$ D) $(y + w)(x + z)$

Midterm Review Package Answer Section

MULTIPLE CHOICE

1. ANS: B PTS: 1 DIF: Easy REF: 1.1 Imperial Measures of Length
LOC: 10.M2 TOP: Measurement KEY: Procedural Knowledge
2. ANS: C PTS: 1 DIF: Easy REF: 1.1 Imperial Measures of Length
LOC: 10.M2 TOP: Measurement KEY: Procedural Knowledge
3. ANS: B PTS: 1 DIF: Moderate REF: 1.1 Imperial Measures of Length
LOC: 10.M2 TOP: Measurement KEY: Procedural Knowledge
4. ANS: A PTS: 1 DIF: Easy REF: 1.2 Measuring Length and Distance
LOC: 10.M1 TOP: Measurement KEY: Conceptual Understanding
5. ANS: B PTS: 1 DIF: Easy REF: 1.2 Measuring Length and Distance
LOC: 10.M1 TOP: Measurement KEY: Conceptual Understanding
6. ANS: A PTS: 1 DIF: Easy REF: 1.3 Relating SI and Imperial Units
LOC: 10.M2 TOP: Measurement KEY: Procedural Knowledge
7. ANS: D PTS: 1 DIF: Moderate REF: 1.3 Relating SI and Imperial Units
LOC: 10.M2 TOP: Measurement KEY: Procedural Knowledge
8. ANS: C PTS: 1 DIF: Moderate REF: 1.3 Relating SI and Imperial Units
LOC: 10.M2 TOP: Measurement KEY: Procedural Knowledge
9. ANS: A PTS: 1 DIF: Difficult
REF: 1.4 Surface Areas of Right Pyramids and Right Cones LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
10. ANS: B PTS: 1 DIF: Easy
REF: 1.5 Volumes of Right Pyramids and Right Cones LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
11. ANS: B PTS: 1 DIF: Easy
REF: 1.5 Volumes of Right Pyramids and Right Cones LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
12. ANS: B PTS: 1 DIF: Easy
REF: 1.6 Surface Area and Volume of a Sphere LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
13. ANS: A PTS: 1 DIF: Easy
REF: 1.6 Surface Area and Volume of a Sphere LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
14. ANS: B PTS: 1 DIF: Easy
REF: 1.6 Surface Area and Volume of a Sphere LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
15. ANS: C PTS: 1 DIF: Difficult
REF: 1.6 Surface Area and Volume of a Sphere LOC: 10.M3
TOP: Measurement KEY: Procedural Knowledge
16. ANS: D PTS: 1 DIF: Easy REF: 1.7 Solving Problems Involving Objects
LOC: 10.M3 TOP: Measurement KEY: Procedural Knowledge
17. ANS: C PTS: 1 DIF: Moderate REF: 1.7 Solving Problems Involving Objects
LOC: 10.M3 TOP: Measurement KEY: Procedural Knowledge

18. ANS: C PTS: 1 DIF: Moderate REF: 1.7 Solving Problems Involving Objects
LOC: 10.M3 TOP: Measurement KEY: Procedural Knowledge
19. ANS: B PTS: 1 DIF: Easy REF: 2.1 The Tangent Ratio
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
20. ANS: C PTS: 1 DIF: Moderate REF: 2.1 The Tangent Ratio
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
21. ANS: B PTS: 1 DIF: Moderate REF: 2.1 The Tangent Ratio
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
22. ANS: A PTS: 1 DIF: Easy REF: 2.1 The Tangent Ratio
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
23. ANS: D PTS: 1 DIF: Moderate REF: 2.1 The Tangent Ratio
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
24. ANS: D PTS: 1 DIF: Easy
REF: 2.2 Using the Tangent Ratio to Calculate Lengths LOC: 10.M4
TOP: Measurement KEY: Procedural Knowledge
25. ANS: B PTS: 1 DIF: Easy
REF: 2.2 Using the Tangent Ratio to Calculate Lengths LOC: 10.M4
TOP: Measurement KEY: Procedural Knowledge
26. ANS: C PTS: 1 DIF: Moderate REF: 2.4 The Sine and Cosine Ratios
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
27. ANS: D PTS: 1 DIF: Easy REF: 2.4 The Sine and Cosine Ratios
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
28. ANS: C PTS: 1 DIF: Easy REF: 2.4 The Sine and Cosine Ratios
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
29. ANS: A PTS: 1 DIF: Moderate
REF: 2.5 Using the Sine and Cosine Ratios to Calculate Lengths
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
30. ANS: D PTS: 1 DIF: Easy
REF: 2.5 Using the Sine and Cosine Ratios to Calculate Lengths
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
31. ANS: B PTS: 1 DIF: Easy REF: 2.6 Applying the Trigonometric Ratios
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
32. ANS: C PTS: 1 DIF: Easy REF: 2.6 Applying the Trigonometric Ratios
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
33. ANS: D PTS: 1 DIF: Moderate
REF: 2.7 Solving Problems Involving More than One Right Triangle
LOC: 10.M4 TOP: Measurement KEY: Procedural Knowledge
34. ANS: D PTS: 1 DIF: Moderate
REF: 3.1 Factors and Multiples of Whole Numbers LOC: 10.AN1
TOP: Algebra and Number KEY: Procedural Knowledge
35. ANS: A PTS: 1 DIF: Moderate
REF: 3.1 Factors and Multiples of Whole Numbers LOC: 10.AN1
TOP: Algebra and Number KEY: Procedural Knowledge
36. ANS: D PTS: 1 DIF: Easy
REF: 3.2 Perfect Squares, Perfect Cubes, and Their Roots LOC: 10.AN1
TOP: Algebra and Number KEY: Procedural Knowledge

37. ANS: B PTS: 1 DIF: Easy
REF: 3.2 Perfect Squares, Perfect Cubes, and Their Roots LOC: 10.AN1
TOP: Algebra and Number KEY: Procedural Knowledge
38. ANS: A PTS: 1 DIF: Easy
REF: 3.2 Perfect Squares, Perfect Cubes, and Their Roots LOC: 10.AN1
TOP: Algebra and Number KEY: Procedural Knowledge
39. ANS: C PTS: 1 DIF: Easy REF: 3.3 Common Factors of a Polynomial
LOC: 10.AN5 TOP: Algebra and Number KEY: Procedural Knowledge
40. ANS: B PTS: 1 DIF: Moderate REF: 3.3 Common Factors of a Polynomial
LOC: 10.AN5 TOP: Algebra and Number KEY: Procedural Knowledge
41. ANS: C PTS: 1 DIF: Easy REF: 3.4 Modelling Trinomials as Binomial Products LOC: 10.AN5
TOP: Algebra and Number KEY: Procedural Knowledge
42. ANS: A PTS: 1 DIF: Easy REF: 3.5 Polynomials of the Form $x^2 + bx + c$ LOC: 10.AN4
TOP: Algebra and Number KEY: Procedural Knowledge
43. ANS: C PTS: 1 DIF: Easy REF: 3.5 Polynomials of the Form $x^2 + bx + c$ LOC: 10.AN5
TOP: Algebra and Number KEY: Procedural Knowledge
44. ANS: D PTS: 1 DIF: Moderate REF: 3.5 Polynomials of the Form $x^2 + bx + c$ LOC: 10.AN5
TOP: Algebra and Number KEY: Procedural Knowledge
45. ANS: D PTS: 1 DIF: Moderate REF: 3.5 Polynomials of the Form $x^2 + bx + c$ LOC: 10.AN5
TOP: Algebra and Number KEY: Procedural Knowledge
46. ANS: A PTS: 1 DIF: Easy REF: 3.6 Polynomials of the Form $ax^2 + bx + c$ LOC: 10.AN5
TOP: Algebra and Number KEY: Procedural Knowledge
47. ANS: C PTS: 1 DIF: Easy REF: 3.7 Multiplying Polynomials
LOC: 10.AN4 TOP: Algebra and Number KEY: Procedural Knowledge
48. ANS: C PTS: 1 DIF: Easy REF: 3.7 Multiplying Polynomials
LOC: 10.AN4 TOP: Algebra and Number KEY: Procedural Knowledge
49. ANS: D PTS: 1 DIF: Moderate REF: 3.7 Multiplying Polynomials
LOC: 10.AN4 TOP: Algebra and Number KEY: Procedural Knowledge
50. ANS: A PTS: 1 DIF: Moderate REF: 3.7 Multiplying Polynomials
LOC: 10.AN4 TOP: Algebra and Number KEY: Procedural Knowledge
51. ANS: B PTS: 1 DIF: Difficult REF: 3.7 Multiplying Polynomials
LOC: 10.AN4 TOP: Algebra and Number KEY: Procedural Knowledge
52. ANS: D PTS: 1 DIF: Easy REF: 3.8 Factoring Special Polynomials
LOC: 10.AN5 TOP: Algebra and Number KEY: Procedural Knowledge
53. ANS: B PTS: 1 DIF: Easy REF: 4.1 Estimating Roots
LOC: 10.AN2 TOP: Algebra and Number KEY: Procedural Knowledge
54. ANS: A PTS: 1 DIF: Easy REF: 4.1 Estimating Roots
LOC: 10.AN2 TOP: Algebra and Number KEY: Conceptual Understanding
55. ANS: D PTS: 1 DIF: Easy REF: 4.1 Estimating Roots
LOC: 10.AN1 TOP: Algebra and Number KEY: Conceptual Understanding

56.	ANS: B LOC: 10.AN2	PTS: 1 TOP: Algebra and Number	DIF: Moderate	REF: 4.2 Irrational Numbers KEY: Conceptual Understanding
57.	ANS: A LOC: 10.AN2	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.2 Irrational Numbers KEY: Conceptual Understanding
58.	ANS: B LOC: 10.AN2	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.3 Mixed and Entire Radicals KEY: Conceptual Understanding
59.	ANS: C LOC: 10.AN2	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.3 Mixed and Entire Radicals KEY: Conceptual Understanding
60.	ANS: C LOC: 10.AN2	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.3 Mixed and Entire Radicals KEY: Conceptual Understanding
61.	ANS: A LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.4 Fractional Exponents and Radicals KEY: Conceptual Understanding
62.	ANS: C LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Moderate	REF: 4.4 Fractional Exponents and Radicals KEY: Conceptual Understanding
63.	ANS: B LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Moderate	REF: 4.4 Fractional Exponents and Radicals KEY: Conceptual Understanding
64.	ANS: A LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.5 Negative Exponents and Reciprocals KEY: Conceptual Understanding
65.	ANS: A LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.5 Negative Exponents and Reciprocals KEY: Conceptual Understanding
66.	ANS: D LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.5 Negative Exponents and Reciprocals KEY: Conceptual Understanding
67.	ANS: A LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.6 Applying the Exponent Laws KEY: Conceptual Understanding
68.	ANS: B LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Moderate	REF: 4.6 Applying the Exponent Laws KEY: Conceptual Understanding
69.	ANS: A LOC: 10.AN3	PTS: 1 TOP: Algebra and Number	DIF: Easy	REF: 4.6 Applying the Exponent Laws KEY: Conceptual Understanding
70.	ANS: C NAT: M1	PTS: 1 TOP: SI Measurement	DIF: A	OBJ: Section 1.1 KEY: SI
71.	ANS: C NAT: M1	PTS: 1 TOP: SI Measurement	DIF: A	OBJ: Section 1.1 KEY: metre SI
72.	ANS: C NAT: M1	PTS: 1 TOP: SI Measurement	DIF: B	OBJ: Section 1.1 KEY: caliper measuring instruments SI
73.	ANS: D NAT: M1	PTS: 1 TOP: Imperial Measurement	DIF: B	OBJ: Section 1.2 KEY: caliper imperial inch measuring instruments
74.	ANS: A NAT: M1 M2	PTS: 1 TOP: Converting Between SI and Imperial Systems	DIF: C	OBJ: Section 1.3 KEY: conversion imperial kilometre mile SI speed
75.	ANS: B NAT: M3	PTS: 1 TOP: Surface Area	DIF: A	OBJ: Section 2.2 KEY: calculate surface area right prism SI
76.	ANS: C NAT: M4	PTS: 1 TOP: The Tangent Ratio	DIF: A	OBJ: Section 3.1 KEY: tangent ratio calculate a tangent ratio
77.	ANS: D NAT: M4	PTS: 1 TOP: The Sine and Cosine Ratios	DIF: A	OBJ: Section 3.2 KEY: cosine ratio define the cosine ratio

78. ANS: A PTS: 1 DIF: A OBJ: Section 3.2
 NAT: M4 TOP: The Sine and Cosine Ratios KEY: cosine ratio | calculate a cosine ratio
79. ANS: D PTS: 1 DIF: A OBJ: Section 4.2
 NAT: AN3 TOP: Integral Exponents KEY: integral exponent | power
80. ANS: D PTS: 1 DIF: A OBJ: Section 4.2
 NAT: AN3 TOP: Integral Exponents KEY: integral exponent | order of operations
81. ANS: C PTS: 1 DIF: B OBJ: Section 4.2
 NAT: AN3 TOP: Integral Exponents
 KEY: exponent laws | zero exponent | negative exponent
82. ANS: A PTS: 1 DIF: B OBJ: Section 4.4
 NAT: AN3 TOP: Irrational Numbers KEY: convert radical to power
83. ANS: C PTS: 1 DIF: C OBJ: Section 4.3| Section 4.4
 NAT: AN3 TOP: Rational Exponents | Irrational Numbers
 KEY: exponent laws | power of a power | convert power to radical
84. ANS: D PTS: 1 DIF: B OBJ: Section 4.4
 NAT: AN2 TOP: Irrational Numbers KEY: order irrational numbers
85. ANS: D PTS: 1 DIF: B OBJ: Section 5.4
 NAT: AN5 TOP: Factoring Special Trinomials KEY: difference of squares | factoring
86. ANS: C PTS: 1 DIF: B OBJ: Section 5.4
 NAT: AN5 TOP: Factoring Special Trinomials KEY: perfect square | trinomial | substitution
87. ANS: B PTS: 1 DIF: A OBJ: Section 5.4
 NAT: AN4 TOP: Factoring Special Trinomials
 KEY: multiplying | binomial by binomial | distributive property | perfect square | trinomial
88. ANS: C PTS: 1 DIF: A OBJ: Section 5.3
 NAT: AN5 TOP: Factoring Trinomials KEY: multiplying | adding | factors
89. ANS: C PTS: 1 DIF: A OBJ: Section 5.3
 NAT: AN5 TOP: Factoring Trinomials KEY: multiplying | adding | factors
90. ANS: D PTS: 1 DIF: B OBJ: Section 5.3
 NAT: AN5 TOP: Factoring Trinomials KEY: factoring | trinomial
91. ANS: C PTS: 1 DIF: B OBJ: Unit 1 Review
 NAT: M1 TOP: 2.3 Volume KEY: SI | calculate volume | right cylinder
92. ANS: B PTS: 1 DIF: B OBJ: Unit 2 Review
 NAT: AN3 TOP: 4.2 Integral Exponents KEY: exponent laws | integral exponents
93. ANS: D PTS: 1 DIF: B OBJ: Unit 2 Review
 NAT: AN3 TOP: 4.4 Irrational Numbers KEY: exponent laws | integral exponents
94. ANS: A PTS: 1 DIF: A OBJ: Unit 2 Review
 NAT: AN4 TOP: 5.1 Multiplying Polynomials KEY: multiply polynomials | trinomial
95. ANS: A PTS: 1 DIF: D OBJ: Unit 2 Review
 NAT: AN5 TOP: 5.4 Factoring Special Trinomials KEY: simplify | difference of squares
96. ANS: D PTS: 1 DIF: B OBJ: Unit 2 Review
 NAT: AN5 TOP: 5.2 Common Factors KEY: factors