Provincial Exam Preparation Booklet
Trigonometry

Multiple Choice Key:

1. B	18. A	35. C	52. D	69. D	86. D	103. A	120. B
2. A	19. B	36. B	53. A	70. D	87. C	104. A	121. A
3. A	20. B	37. A	54. D	71. C	88. D	105. D	122. C
4. D	21. D	38. D	55. D	72. A	89. D	106. C	123. D
5. D	22. C	39. D	56. D	73. D	90. D	107. B	124. D
6. D	23. B	40. A	57. C	74. D	91. C	108. C	125. A
7. D	24. C	41. D	58. A	75. C	92. D	109. C	126. B
8. B	25. C	42. A	59. D	76. D	93. B	110. A	127. B
9. C	26. A	43. D	60. C	77. C	94. A	111. B	128. D
10. A	27. B	44. A	61. C	78. B	95. D	112. D	129. D
11. A	28. A	45. A	62. D	79. B	96. B	113. A	130. C
12. A	29. C	46. C	63. D	80. A	97. B	114. D	131. A
13. A	30. A	47. D	64. B	81. B	98. B	115. B	132. D
14. D	31. D	48. D	65. C	82. B	99. D	116. B	133. C
15. A	32. A	49. D	66. A	83. A	100. D	117. A	134. A
16. B	33. D	50. C	67. B	84. B	101. D	118. A	135. B
17. B	34. C	51. A	68. D	85. C	102. D	119. C	136. B

Written Key:

1a) $h = -30\cos\frac{\pi}{24}t + 32$

$h = 30\cos\frac{\pi}{24}(t-24) + 32$

$h = 30\sin\frac{\pi}{24}(t-12) + 32$

1b) 13.54 seconds

2. $x = \frac{\pi}{2} + 2n\pi$ $x = \frac{3\pi}{2} + 2n\pi$ $x = 2n\pi$

3. proofs may vary

4. proofs may vary

5. $x = \frac{\pi}{3} + 2n\pi$ $x = \frac{5\pi}{3} + 2n\pi$ $x = \pi + 2n\pi$

6. proofs may vary

7. proofs may vary

8. $x = 0.84,\ 3.14,\ 5.44$

9. proofs may vary

10a) $h = -25\cos\frac{2\pi}{40}t + 27$

10b) 12.07 seconds

11. proofs may vary

12a) $x = 0,\ \pi \quad x = \frac{\pi}{6},\ \frac{5\pi}{6}$

12b) $x = n\pi \qquad x = \frac{\pi}{6} + 2n\pi, \quad x = \frac{5\pi}{6} + 2n\pi$

13. proofs may vary

14a) $x = \frac{2\pi}{3}$ or $\frac{4\pi}{3} \qquad x = 0$

14b) $x = \frac{2\pi}{3} + 2\pi n \quad x = \frac{4\pi}{3} + 2\pi n \quad x = 2\pi n$

15. proofs may vary

16. $x = 0,\ \pi \qquad x = \frac{\pi}{6},\ \frac{5\pi}{6}$

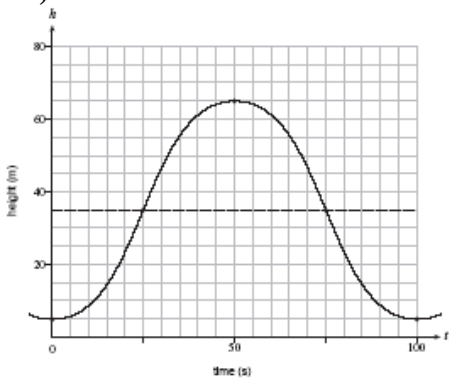
17. proofs may vary

18. proofs may vary

19. proofs may vary

20. $y = 4\cos 2\left(x - \frac{\pi}{6}\right) - 1$ or $y = -4\cos 2\left(x + \frac{\pi}{3}\right) - 1$ or $y = 4\sin 2\left(x + \frac{\pi}{12}\right) - 1$ or $y = -4\sin 2\left(x - \frac{5\pi}{12}\right) - 1$

21a)



21b) $h = -30\sin\frac{2\pi}{100}(t - 75) + 35$

$h = -30\sin\frac{2\pi}{100}(t + 25) + 35 \quad h = 30\sin\frac{2\pi}{100}(t - 25) + 35$

22. $h = -30\cos\frac{2\pi}{1.6}t + 50$ or $h = 30\sin\frac{2\pi}{1.6}(t - 0.4) + 50$ or $h = 30\cos\frac{2\pi}{1.6}(t - 0.8) + 50$ or

$h = -30\sin\frac{2\pi}{1.6}(t - 1.2) + 50$ or $h = -30\sin\frac{2\pi}{1.6}(t + 0.4) + 50$

23. proofs may vary

24. proofs may vary