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EAST SUSSEX COLLEGE EASTBOURNE

HNC/HND Construction and the Built Environment

Interview task

Please can you complete the questions below and bring this to your interview.

Student Name	Course

1. Work out the answer to the following with your calculator:

a) $5000 - \left(\frac{25\times4}{2} + \frac{3}{2}\right)^2$

b) $\frac{72.5 - 4.5}{3 \times 12 + 32}$

c) $\frac{\sqrt{46.6 + 17.4}}{\frac{1}{2}}$

d) $\frac{(9-3)^2 + 3}{6}$

e) $\sqrt{6.8}\ x\ 3 - 5$

f) $1.4(23.5 \times 2.8 - 12.6)^2$

2. Determine the values of a, b and c:

   I. $c - b = a$ Find the value of b if $a = 3$ and $c = 2$

   II. $2a + 3b = c$ Find the value of c if $a = 3$ and b = 2

   III. $a^2 + b^2 = c^2$ Find the value of a if $c = 3$ and $b = 2$

3. Solve for the following equations for *x* and *y*

   3x + 4y=-6 and x+ 6y=-16

4. Round the following figures to 6 significant figures:

   I. 983.5246
   II. 652881.15

5. Write the following numbers to 1 and then to 3 decimal places:

   I. 12.87654
   II. 93.6131

6. Expand the brackets:

   I. (2a + 7)(6a + 2)
   II. (4b + 5)(3b +4)

7. write the following numbers in standard form:

   I. 875 II. 7864
   III. 8767 IV. 0.00221

8. Find the perimeter of the following figures;

   I. a circle with a diameter of 3 m
   II. a right angle triangle with a base length 3m and height 4m
   III. a rectangle with width 2 m and length 3 m

9. A triangular gable ended roof is shown below.

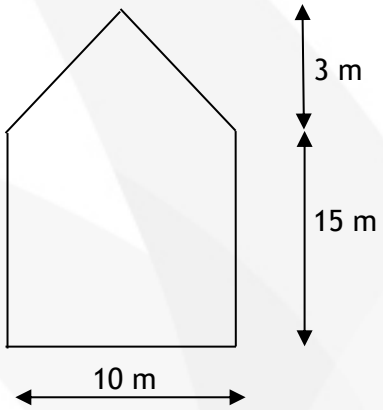

Figure 1: Triangular Gable

   a) Determine distance around the figure shown in **Figure 1**

10. Find the area of the following shapes: