**UNIT 6 – RIGHT ANGLE TRIANGLES - ANSWERS**

**ASSIGNMENT 1 – LABELLING TRIANGLES**

1)

a) X b)

R

z y t

s

Y x Z S r T

c) d)

D A

f

E

e b

c

d

B a C

F

2)

a) b)

f

C E D

a b d e

F

B A

c

c) d)

Y

R x

p

w W

q Q

r y

X

P

**UNIT 6 – RIGHT ANGLE TRIANGLES - ANSWERS**

**ASSIGNMENT 2 – PYTHAGOREAN THEOREM**

1) a) y2 = z2 + x2 b) e2 = d2 + f2

2) a) p = 10.82 b) m = 8.06

c) y = 6.24 d) z = 8.66

3) a) 10

b) 17.5

c) 16

d) 30

4) 21.4 cm

5) 5.5 m

6) 10

7) 11.1 m

8) *l*2 *=* d2 + h2

9) 12.5 feet

10) 19.2 m

**ASSIGNMENT 3 – PYTHAGOREAN TRIPLES**

1) a) yes - 52 = 42 + 32

b) no - 232 ≠ 212 + 92

c) yes - 252 = 242 + 72

d) yes - 172 = 152 + 82

**ASSIGNMENT 4 – TRIGONOMETRY**

1) 2)

3) 4)

θ

o

h

**ASSIGNMENT 5 – THE SINE RATIO**

1 a) sin X = 0.6232

b) sin X = 0.5417

2) a) 0.1736

b) 0.7431

c) 0.9744

d) 0.9962

3) a) 0

b) 1

**ASSIGNMENT 6 – Using Sine RATIO in Solving Right Triangles**

1)a) 8.2 cm

b) 13.3 m

2) 9.2 m

3) 4.0 m

**ASSIGNMENT 7 – THE COSINE RATIO**

1 a) cos X = 0.6371

b) cos X = 0.8438

2) a) 0.9848

b) 0.6691

c) 0.2250

d) 0.0872

3) a) 1

b) 0

|  |  |  |
| --- | --- | --- |
| **ASSIGNMENT 8 – Using COSine RATIO in Solving Right Triangles**  1)a) 7.2 cm  b) 12.5 m  2) 26.6 m  3) 5.4 m | **ASSIGNMENT 9 – THE TANGENT RATIO**  1 a) tan X = 0.7846  b) tan X = 0.6420  2) a) 0.1763  b) 1.1106  c) 4.3315  d) 11.4301  3) a) 0  b) 1  c) 57.2900  d) undefined (“error”) | **ASSIGNMENT 10 – Using TANGENT RATIO in Solving Right Triangles**  1) a) 7.22 cm  b) 12.21 m  2) 19.2 m  3) 5.46 ft |

**ASSIGNMENT 11 – ANGLE OF ELEVATION AND DEPRESSION**

1) 7.5 m

2) 141 m

3) 216.4 m

|  |  |  |
| --- | --- | --- |
| **ASSIGNMENT 12 – FINDING ANGLES**  1) a) 330 b) 260  c) 670 d) 890  e) 720 f) 250  2) 610  3) 510  4) 310  5) 90  6) 540 | **ASSIGNMENT 13 – Solving Right Triangles**  1a) ∠F = 650  d = 7.6 m  f = 16.3 m  b) ∠P = 480  ∠R = 420  p = 148.6 cm | 2a) ∠A = 530  b = 11.3 in  a = 9.0 in  2b) 380, 9.5 m, 7.4 m |