NAME: _____

Basic Skills Worksheet

Convert the following to **scientific notation** in standard form

1) 43126 1)_____

2) .0042 2)_____

3) -700000 3)_____

4) -.0000150 4)_____

5) $.0075 \times 10^{3}$ 5)_____

6) 970×10^{-4} 6)_____

7) $-.000516 \times 10^{-5}$ 7)_____

Round the following to the number of figures shown ***and*** convert to scientific notation in standard form

8) 634000 round to 2 figures 8)_____

9) .0345 round to 2 figures 9)_____

10) 298.76×10^{-4} round to 1 figure 10)_____

11) 8.651 round to 2 figures 11)_____

Unit conversions

12) 3500 mm into km 12)_____

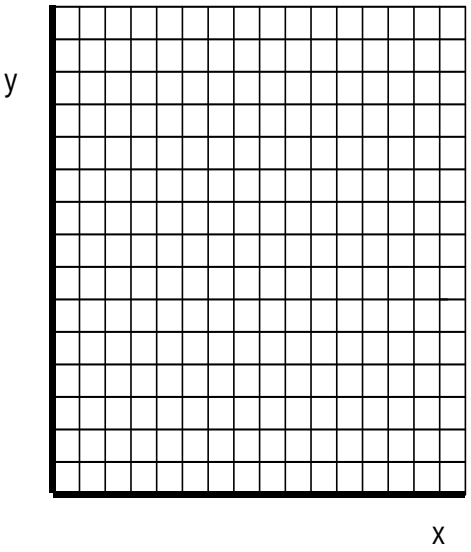
13) 22.3 metres/second into km/hr 13)_____

14) 4584 secs to min & hours 14)_____

15) Graphing

Graph the following data on the graph below:

X	1.2	2.2	3.3	4.2	5.3	6.2	7.4
Y	3.5	4.4	5.6	6.4	7.3	8.3	9.2



a) Determine the slope of the line from the graph

b) Estimate the y-intercept of the graph, and combine it with the slope to determine the equation of the line. Your answer should look like this: y=mx+b - write in your values for m and b.

Solve the following equations:

16) $a + 7 = 16$

17) $x - 11 = 45$

18) $17 + x = -29$

19) $25 - x = 8$

20) $3x = 27$

21) $\frac{x}{4} = 12$

22) $\frac{2x}{3} = -10$

23) $\frac{4x}{37} = 28$

24) $3x + 7 = 34$

25) $3x - 11 = 46$

26) $17 + 2x = -29$

27) $25 - 17x = 8$

28) $4x + 11 = 55$

29) $3x - 9 = -33$

30) $\frac{x}{4} + 7 = -2$

31) $\frac{x}{3} - 6 = 15$

32) $25 - \frac{x}{5} = 15$

33) $\frac{2x}{3} + 7 = -17$

34) $\frac{4x}{5} + 6 = 18$

35) $\frac{2x}{3} - 11 = 45$

36) $25 - \frac{2x}{3} = 15$

37) 3(x + 5) = 18

38) 2(x – 7) = 22

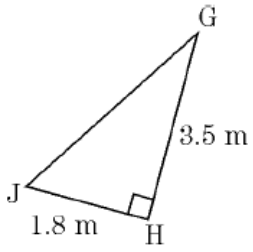
39) 5(4 – x) = 55

40) 3(2x + 5) = -21

Solve the following triangles:

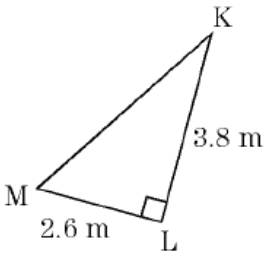
In the triangle, determine ∠J to the nearest degree.

a) 27° b) 31° c) 53° d) 59° e) 63°



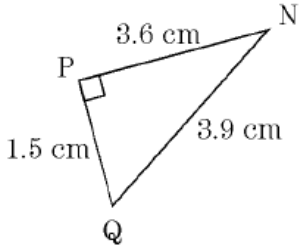
In the triangle, determine ∠K to the nearest degree.

a) 24° b) 34° c) 43° d) 47° e) 56°



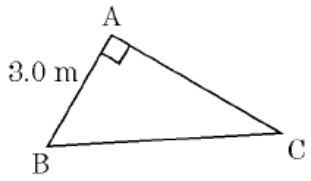
In △NPQ, calculate ∠N to the nearest degree.

a) 23° b) 25° c) 33° d) 65° e) 67°



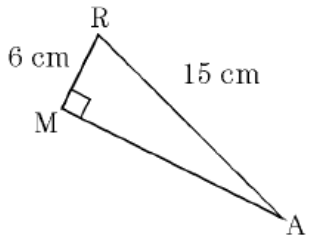
In $\triangle ABC$, calculate AC to two decimal places given that $\angle B = 50°$.

a) 0.40 m b) 1.93 m c) 2.30 m d) 2.52 m e) 3.58 m



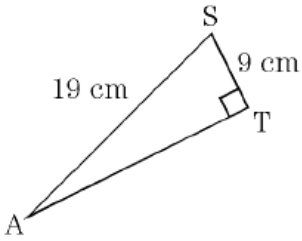
In the triangle shown, determine $\angle A$ to the nearest degree.

a) 22° b) 24° c) 32° d) 66° e) 68°



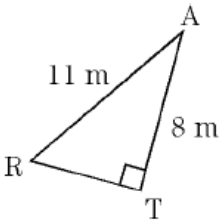
In the triangle shown, determine $\angle A$ to the nearest degree.

a) 18° b) 25° c) 28° d) 62° e) 65°



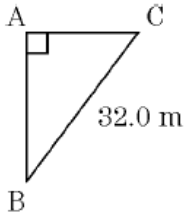
In the triangle shown, determine $\angle A$ to the nearest degree.

a) 32° b) 36° c) 43° d) 47° e) 54°



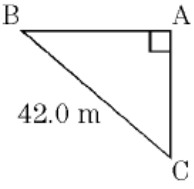
In $\triangle ABC$, calculate AC to the nearest centimetre given that $\angle C = 52°$.

a) 18 cm b) 20 cm c) 25 cm d) 41 cm e) 52 cm



In $\triangle ABC$, calculate AB to the nearest centimetre given that $\angle B = 29°$.

a) 20 cm b) 23 cm c) 37 cm d) 48 cm e) 76 cm



Answers:

1. 4.3126×10^{4}
2. 4.2×10^{-3}
3. -7.0×10^{5}
4. -1.5x10-5
5. 7.5
6. 9.7×10^{-2}
7. -5.16×10^{-9}
8. 6.3×10^{5}
9. 3.5×10^{-2}
10. 3×10^{-2}
11. 8.7
12. 3.5×10^{-3} km
13. 80.3 km/hr
14. 76.4 min, 1.27 hr
15.
16. 9
17. 56
18. -46
19. 17
20. 9
21. 48
22. -15
23. 259
24. 9
25. 19
26. -23
27. 1
28. 11
29. -8
30. -36
31. 63
32. 50
33. -36
34. 15
35. 84
36. 15
37. 1
38. 18
39. -7
40. -6
41. E
42. B
43. A
44. E
45. B
46. C
47. C
48. B
49. C