

Year 9 Set 1 TEST Algebra and Trigonometry

1) Expand

a) $4(x + 7)$

b) $3y(2 - 5y)$

c) $x(x + 9)$

d) $3x(7 + 5x)$

2) Expand and simplify

a) $2(x + 7) + 3(2x + 9)$

b) $5(2x - 1) - 6(3x - 7)$

c) $3(x^2 + 3x + 1) - 2(x^2 - 2x - 7)$

3) Expand and simplify

a) $(x + 6)(x + 2)$

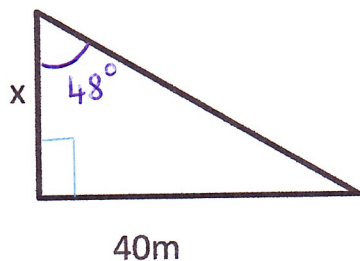
b) $(x - 7)(x - 9)$

c) $(2x + 3)(5x - 2)$

d) $(5 - 3x)(4x + 3)$

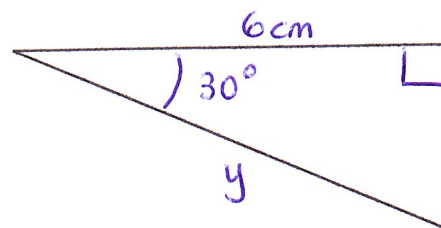
4) Calculate the requested value

a)



Calculate x

b)



Calculate y

4) Solve these equations

a) $2(x + 7) = 20$

b) $3(2x - 1) - 2(x + 7) = 2$

5) Make the letter in the brackets the subject of the formula

a) $T = 3y + 7$ (y)

b) $H = \frac{7y}{2w}$ (w)

c) $g = 7(t - 5) + 2(3t + 4)$ (t)

d) $h = 3(t^2 + 3) + a(t^2 - 7)$ (t)

6) Solve these equations

a) $\frac{3x+1}{4} = \frac{2}{3}$

b) $\frac{x+5}{2} - \frac{3x-2}{3} = 5$

7) Calculate the height of the small building if the ladder is 30m long.

