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MATHEMATICS FORM 3
ALGEBRAIC FORMULAE

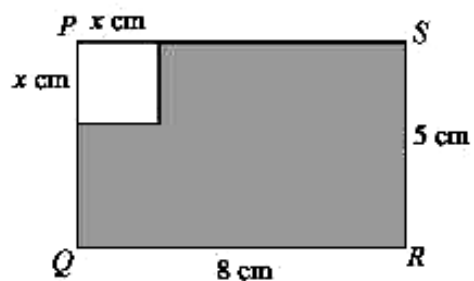
1. Given that $\frac{p-q}{r} = 2r$, express q as the subject of a formula
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2. Given that $\frac{m}{n} - m = 7$, then $m =$
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3. Given that $3a^2 = 5d - 7c$, express c as the subject of a formula
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4. Given that $F = \frac{3k}{\sqrt{p}}$, if $F = 4$ and $p = 81$, find the value of k
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5.

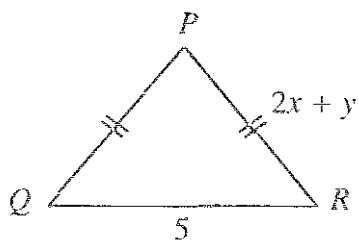


In the diagram, $PQRS$ is a rectangle. If the area of the shaded part is $y \text{ cm}^2$, write a formula to relate x and y .

6. Given that $\sqrt{\frac{t}{y+2}} = 7$, express y in terms of t

7. Given that $6x - 4(y - x) = 7$, then $x =$

8.



The diagram shows an isosceles triangle PQR . If the perimeter of the triangle is p , express p in terms of x and y

9. Given that $\frac{25}{k} = \frac{4k}{h}$, $k =$

10. Given that $E = \frac{1}{2}mc^2$, $c =$

11. Given that $b = \frac{a}{1-c}$, express c as the subject of the formula
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12. Given $v^2 = u^2 + 2as$. If $u = 8$, $a = 2$ and $s = 9$, find the value of v .
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13. Given that $x = \frac{1+y}{1-y}$, express y in terms of x .
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14. Given that $3y - q = p + 2y$, express y in terms of p and q .
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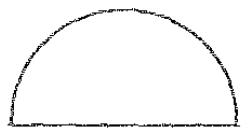
15. Given that $\frac{5y-4}{y+p} = 3$, express y in terms of p .
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16. Given that $G = \frac{4n + nk}{9}$, express n in terms of G and k .
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17. Ali's body mass is M kg. Chong's body mass is N kg. Given that Chong is 5 kg heavier than Ali, write a formula to relate M and N .
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18. Given that $v = \sqrt{2gh}$, find the value of v when $g = 9.8$ and $h = 10$.
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19.



The diagram shows a semi-circle. If the diameter is d cm and the perimeter of the diagram is p meter, write a formula to relate p and d .

20. Given that $w = xy + 3$. Given that $y = -2$ and $x = 3$, find the value of $wy^3 - x^2$.
