



International Test Paper

Maths Paper

(40 Minutes)

MATHEMATICS

1. If $x = -5$, $y = 2$ evaluate the following

a) $(2x)^2 - 3y^2$

b) xy^2

c) $-7 - 2x$

2. Simplify the following:

a) $8t^5 \div 2t^2$

b) $(5m^2)^3$

c) $\frac{rs}{3t} \times \frac{9s^2t}{3r}$

d) $\frac{s^3}{t^3} \div \frac{s}{t}$

e) $\frac{3y+4}{6} + \frac{2y-1}{9}$

f) $\frac{2}{p} + 3q + \frac{5}{p} - 4q$

3. Re-arrange $2x + 3y = 5$ into the form $y = mx + c$

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4. Make x the subject of the formula $a(x - 2) = b(x + 1)$

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5. Make l the subject of the formula $T = 2\pi \sqrt{\frac{l}{g}}$

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6. Calculate

a) $2\frac{2}{3} - 1\frac{1}{5}$

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b) $1\frac{1}{2} \times 2\frac{1}{3}$

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c) $\frac{\frac{1}{4} \times \frac{2}{3} \times \frac{1}{2}}{6}$

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7. Write as 2^n (e.g. $8 = 2^3$)

a) $16 =$

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b) $1 =$

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c) $(8)^4 =$

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8. Multiply out the brackets and simplify:

a) $3p(p + 4) - p(p - 2)$

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b) $(2e - 3)(3e + 1)$

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c) $(x + \frac{1}{x})^2$

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9. Solve the following equations

a) $3(x + 2) - 2(2x - 3) - 7 = 0$

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

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c) $2x + 3y = 5$
 $5x - 2y = -16$

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d) $x^2 + 4x - 21 = 0$

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10. Factorise these expressions

a) $15p^2q - 3pq^2$

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b) $4x^2 + 9x + 2$

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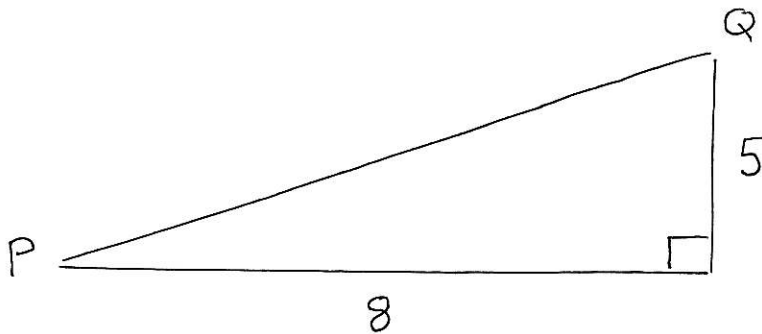
c) $x^2 - 16$

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11. Find the length of the tangent from the point (7, 4) to the circle with centre at (1, 4) and radius 3

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12. From this triangle write down the *exact* values of $\sin P$, $\cos P$ and $\tan P$.



13. If $AB = 5$ cm, $BC = 3$ cm and $CD = 12$ cm, find BE

