

INKMATHS FLASHCARDS

Further Pure 1 results and forms

12 cards · fronts and backs

Print double-sided, flipping on the long edge, and each answer lands behind its question. Cut along the card borders.

Definitions in precise wording, the standard results the formulae booklet does not print, a check-yourself question per topic, and the slips that lose marks. The same cards run on the website with spaced-repetition scheduling, at inkmaths.co.uk/flashcards.

STANDARD RESULT

t-formula:

$$t = \tan(\theta/2): \sin \theta = ?$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

t-formula:

$$t = \tan(\theta/2): \cos \theta = ?$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Weierstrass substitution:

$$t = \tan(x/2): dx = ?$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Taylor series:

$$f(x) = ? \text{ about } x = a$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Parabola:

$$y^2 = 4ax: \text{parametric point?}$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Ellipse:

$$(x^2)/(a^2) + (y^2)/(b^2) = 1: b^2 = ?$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Hyperbola:

$$(x^2)/(a^2) - (y^2)/(b^2) = 1: b^2 = ?$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Vector product:

$$|a \times b| = ?$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$\cos \theta = (1 - t^2)/(1 + t^2)$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$\sin \theta = (2t)/(1 + t^2)$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$f(a) + f'(a)(x - a) + (f''(a))/(2!)(x - a)^2 + \dots$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$dx = (2 dt)/(1 + t^2)$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$b^2 = a^2(1 - e^2), \text{ foci } (\pm ae, 0)$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$(at^2, 2at), \text{ tangent } ty = x + at^2$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$|a||b| \sin \theta, \text{ the parallelogram's area}$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$b^2 = a^2(e^2 - 1), \text{ foci } (\pm ae, 0)$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Scalar triple product:

tetrahedron volume = ?

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

Simpson's rule:

$\int y \, dx \approx ?$

FURTHER PURE 1: RESULTS AND FORMS

DEFINITION

Define: L'Hospital's rule.

FURTHER PURE 1: RESULTS AND FORMS

SPOT THE ERROR

Say what is wrong with this claim:

To solve $x/(x-2) < 3$, multiply both sides by $x-2$ and solve the result.

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$(h)/(3)(y_0 + 4y_1 + 2y_2 + \dots + 4y_{n-1} + y_n)$$

FURTHER PURE 1: RESULTS AND FORMS

STANDARD RESULT

$$(1)/(6) a \cdot b \times c$$

FURTHER PURE 1: RESULTS AND FORMS

SPOT THE ERROR

$x - 2$ is negative when $x < 2$, and multiplying by a negative reverses the inequality. Subtract to one side, combine over a common denominator, and read a sign diagram; the shortcut loses the whole interval $x < 2$.

FURTHER PURE 1: RESULTS AND FORMS

DEFINITION

For an indeterminate form $0/0$ or ∞/∞ , the limit of f/g equals the limit of f'/g' , provided that second limit exists.

FURTHER PURE 1: RESULTS AND FORMS