Write your name, centre number and candidate number in the boxes below.

Surname	Other names

Centre number | | | | | |

Candidate number | | | | |

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Difference of two squares

Time allowed: 1 hour

Subject code **0580**

Mathematics

Paper 2 (Extended)

You must have: a ruler marked in centimetres and millimetres, a protractor, compasses, a pen, an HB pencil and an eraser.
You may use a calculator.

Total marks

/ 46

Instructions

- Answer every question in the space provided on this paper.
- Write in black or dark blue ink. Pencil may be used for diagrams and graphs.
- Fill in your name, centre number and candidate number above.
- Show your working: a correct method can earn marks even if the answer is wrong.
- Unless a question says otherwise, give answers that are not exact to 3 significant figures, and angles in degrees to 1 decimal place.

Information

- This paper has 10 questions worth 46 marks in total.
- The marks for each question or part are shown in brackets, for example [3].

Advice

- Read every question through once before you write anything.
- Use the marks in brackets to judge how long to spend on each part.
- If you finish early, go back and check your working.

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Print at 100% (Actual size) so diagrams keep their real measurements.

1 **(a)** Factorise $p^2 - q^2$.

..... [1]

(b) $p^2 - q^2 = 7$ and $p - q = 2$.

Find the value of $p + q$.

..... [2]

(a) Difference of two squares (b) Difference of two squares Click for more variations

2 Factorise completely.

$$p^2x - 4q^2x$$

Answer ..... [3]

Difference of two squares Click for more variations

3 Factorise completely.

(a) $ax + ay + 3cx + 3cy$

Answer(a) ..... [2]

(b) $3a^2 - 12b^2$

Answer(b) ..... [3]

(a) Factorising by grouping (b) Difference of two squares Click for more variations

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4 Factorise completely.

(a) $px+py-x-y$

..... [2]

(b) $2t^2-98m^2$

..... [3]

(a) Factorising by grouping (b) Difference of two squares Click for more variations

5 **(a)** Factorise.

$18y-3ay+12x-2ax$

..... [2]

(b) Factorise.

$3x^2-48y^2$

..... [3]

(a) Factorising by grouping (b) Difference of two squares Click for more variations

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6 Factorise completely.

(a) $21a^2 + 28ab$

..... [2]

(b) $20x^2 - 45y^2$

..... [3]

(a) Factorising out a common factor (b) Difference of two squares Click for more variations

7 Factorise completely.

(a) $2m + 3p - 8km - 12kp$

..... [2]

(b) $5x^2 - 20y^2$

..... [3]

(a) Factorising by grouping (b) Difference of two squares Click for more variations

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8 Factorise completely.

(a) $1+x-y-xy$

..... [2]

(b) $2x^3-18xy^2$

..... [3]

(a) Factorising by grouping (b) Difference of two squares Click for more variations

9 Factorise completely.

(a) $12m^2-75t^2$

..... [3]

(b) $xy+15+3y+5x$

..... [2]

(a) Difference of two squares (b) Factorising by grouping Click for more variations

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10 Factorise fully.

(a) $24x^2 - 9xy$

..... [2]

(b) $63x^2 - 28y^2$

..... [3]

(a) Factorising out a common factor (b) Difference of two squares Click for more variations

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