Activity 4

Title:
Translations of Circles

Type:
Comparing Multiple Representations

Why you might use this activity:

- to introduce new properties of circles;
- to review and consolidate properties of circles;
- to explore the effect of translations;
- to consolidate learners' understanding of translations.

How you might use this activity:

Learners:

- should use an enlarged version (A3) of the transformation sheet to fill in the missing translations, equations and sketches;
- could check that no two translations, equations or sketches are the same.

Meeting the needs of all learners:

Learners could:

- have the missing sketches, equations and translations given to them to stick on;
- continue beyond the sketch with a further translation;
- design a more difficult task, for example, using a circle not centred on the Origin.

Reviewing the learning from this activity:

Learners could:

- check their sheets using a graph drawing package;
- write up 2 or 3 examples from the sheet with explanation and add on the x and y intercepts and how to calculate them.

What learners might do next:

- use completed square form to convert an equation of a circle in the form $x^2 + ax + y^2 + by = c$ into the form $(x + d)^2 + (y + e)^2 = r^2$ so that translations can be identified.

Further ideas for this type of activity:

- all transformations of all types of graphs.

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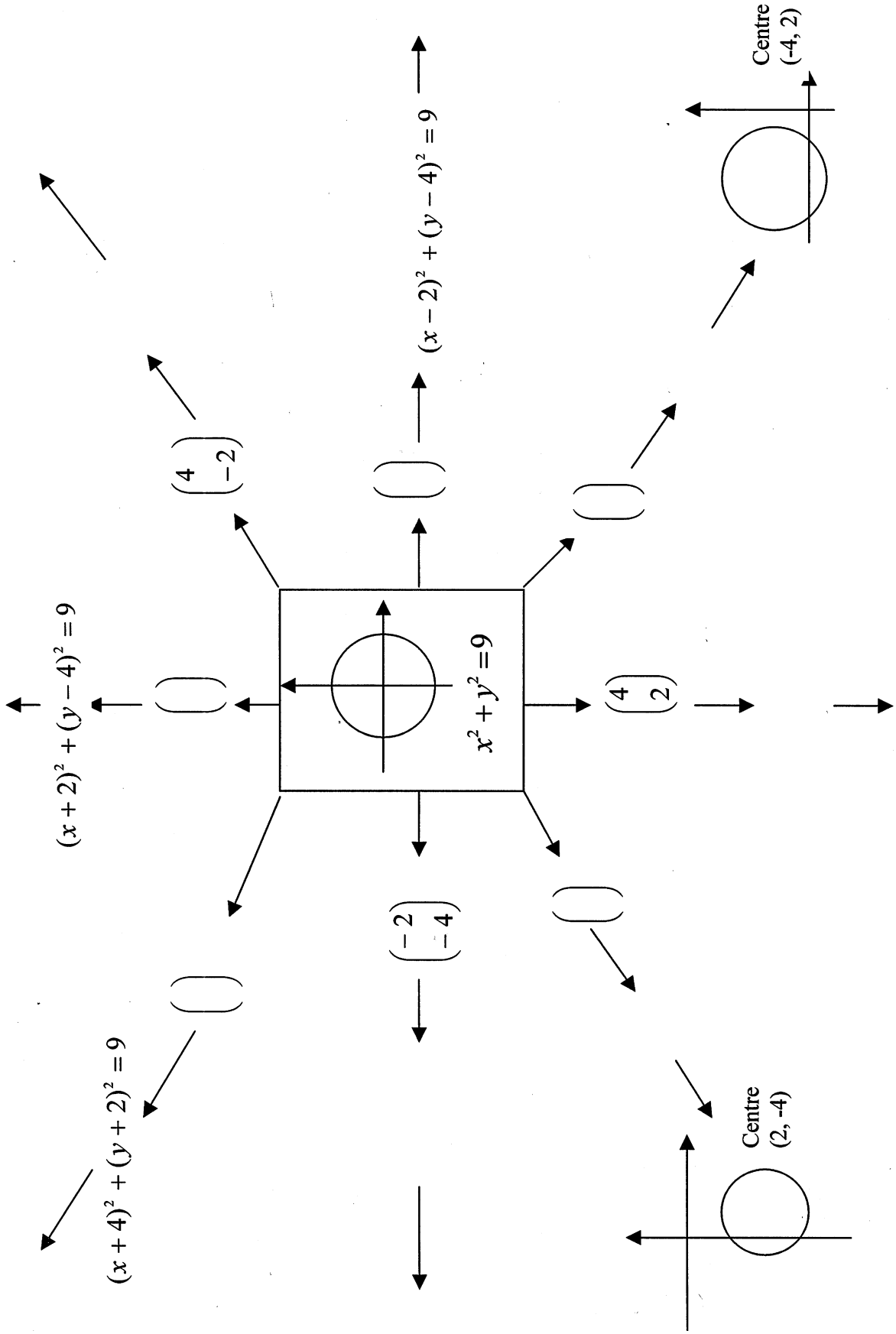

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