Name:

Exam Style Questions



Algebra: Laws of Indices

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

- 1. Read each question carefully before you begin answering it.
- 2. Don't spend too long on one question.
- Attempt every question.
- 4. Check your answers seem right.
- 5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 17



1. (a) Simplify

$$\mathsf{m}^5 \times \mathsf{m}^3$$



(b) Simplify

$$\mathsf{m}^8 \div \mathsf{m}^2$$

(c) Simplify

$$(m^3)^2$$

2. Simplify

$$\frac{m^9 \times m}{m^5} \quad : \quad \frac{m^{10}}{m^5} \quad : \quad m^{9}$$

3.

(a) Simplify



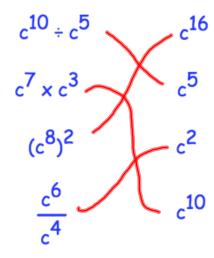


(b) Simplify

$$a^6 \div a^3$$



4. Match the expressions.



5. Simplify the following.

$$\frac{s^3 \times s^4}{s^2}$$



5

6. (a) Simplify

$$w^3 \times w^{-5} = \omega^{-2}$$



(b) Simplify

$$a^4 \div a^{-2}$$



7. Simplify

$$2a^3c^3 \times 3a^2c$$



8. Simplify

$$\frac{10m^5n^4}{2m^2n}$$

9. Simplify

$$(2m^4)^3$$

$$\frac{a^{\frac{1}{5}} \times a^{\frac{2}{3}}}{a^{\frac{3}{5}}}$$

$$\frac{a^{\frac{1}{5}} \times a^{\frac{2}{3}}}{a^{\frac{3}{5}}} \qquad \frac{1}{5} + \frac{2}{3} = \frac{2}{15} + \frac{16}{15} = \frac{12}{15}$$

$$\frac{13}{15} - \frac{2}{5} = \frac{12}{15} - \frac{9}{15} = \frac{14}{15}$$

11. Simplify fully

$$\int \frac{50 \, \text{m}^5}{2 \, \text{m}^3}$$