

## Outcome 4 - Dividing Algebraic Fractions

### Bronze examples

Examples... Turn the second fraction upside down and multiply!

$$\frac{1}{c} \div \frac{1}{d} = \frac{1}{c} \times \frac{d}{1} = \frac{d}{c}$$

$$\frac{2}{e} \div \frac{f}{4} = \frac{2}{e} \times \frac{4}{f} = \frac{8}{ef}$$

$$\frac{p}{r} \div \frac{q}{s} = \frac{p}{r} \times \frac{s}{q} = \frac{ps}{rq}$$

### Silver examples

Examples...

- Turn the second fraction upside down and multiply!
- Simplify!

$$\frac{a}{12} \div \frac{3a}{2} = \frac{a}{12} \times \frac{2}{3a} = \frac{2a}{36a} = \frac{1}{18}$$

$$\frac{15}{t} \div \frac{6}{t^2} = \frac{15}{t} \times \frac{t^2}{6} = \frac{15t^2}{6t} = \frac{5t}{2}$$

$$\frac{8}{9n^3} \div \frac{6}{n} = \frac{8}{9n^3} \times \frac{n}{6} = \frac{8n}{54n^3} = \frac{4}{27n^2}$$

### Gold examples

Examples...

- Turn the second fraction upside down and multiply!
- Simplify!

$$\frac{a}{12} \div \frac{3a}{2} = \frac{a}{12} \times \frac{2}{3a} = \frac{2a}{36a} = \frac{1}{18}$$

$$\frac{15}{t} \div \frac{6}{t^2} = \frac{15}{t} \times \frac{t^2}{6} = \frac{15t^2}{6t} = \frac{5t}{2}$$

$$\frac{8}{9n^3} \div \frac{6}{n} = \frac{8}{9n^3} \times \frac{n}{6} = \frac{8n}{54n^3} = \frac{4}{27n^2}$$

### Bronze Questions

Divide the following fractions...

1

$$\frac{y}{9} \div \frac{1}{2}$$

2

$$\frac{1}{5} \div \frac{b}{9}$$

3

$$\frac{1}{t} \div \frac{3}{17}$$

4

$$\frac{1}{3} \div \frac{8}{p}$$

5

$$\frac{a}{3} \div \frac{b}{4}$$

6

$$\frac{m}{7} \div \frac{10}{n}$$

7

$$\frac{r}{6} \div \frac{s}{t}$$

8

$$\frac{a}{c} \div \frac{b}{d}$$

### Gold Questions

Divide the following fractions...

1

$$\frac{m}{10} \div \frac{5m}{2}$$

2

$$\frac{h}{3} \div \frac{7h}{15}$$

3

$$\frac{2}{y} \div \frac{24}{y^2}$$

4

$$\frac{l^2}{4} \div \frac{l}{28}$$

5

$$\frac{f}{8} \div \frac{f^2}{72}$$

6

$$\frac{8}{3e^3} \div \frac{2}{5e}$$

7

$$\frac{5w^3}{27} \div \frac{w}{3}$$

8

$$\frac{2}{5z^3} \div \frac{12}{z^2}$$

### Silver Questions

Divide the following fractions...

1

$$\frac{y}{12} \div \frac{1}{4}$$

2

$$\frac{1}{3} \div \frac{b}{18}$$

3

$$\frac{8}{t} \div \frac{2}{3}$$

4

$$\frac{5}{8} \div \frac{10}{p}$$

5

$$\frac{a}{14} \div \frac{b}{8}$$

6

$$\frac{m}{22} \div \frac{n}{10}$$

7

$$\frac{r}{10} \div \frac{5s}{2t}$$

8

$$\frac{7w}{8y} \div \frac{3x}{4z}$$

## Bronze Answers

- |            |            |
|------------|------------|
| 1. $2y/9$  | 2. $9/5b$  |
| 3. $17/3t$ | 4. $p/24$  |
| 5. $4a/3b$ | 6. $mn/70$ |
| 7. $rt/6s$ | 8. $ad/bc$ |

## Silver Answers

- |             |              |
|-------------|--------------|
| 1. $y/3$    | 2. $6/b$     |
| 3. $12/t$   | 4. $p/16$    |
| 5. $4a/7b$  | 6. $5m/11n$  |
| 7. $rt/25s$ | 8. $7wz/6xy$ |

## Gold Answers

- |             |              |
|-------------|--------------|
| 1. $1/25$   | 2. $5/7$     |
| 3. $y/12$   | 4. $7l$      |
| 5. $9/f$    | 6. $20/3e^2$ |
| 7. $5w^2/9$ | 8. $1/30z$   |