## Outcome 4 - Dividing Algebraic Fractions

#### Bronze examples

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

#### Silver examples

## Examples...

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

$$\frac{a}{12} \div \frac{3a}{2} = \frac{a}{12} \times \frac{2}{3a} = \frac{2a}{36a} = \frac{1}{18}$$
$$\frac{15}{t} \div \frac{6}{t^2} = \frac{15}{t} \times \frac{t^2}{6} = \frac{15t^2}{6t} = \frac{5t}{2}$$
$$\frac{8}{9n^3} \div \frac{6}{n} = \frac{8}{9n^3} \times \frac{n}{6} = \frac{8n}{54n^3} = \frac{4}{27n^3}$$

#### Gold examples

#### Examples...

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

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

#### **Bronze Questions**

Divide the following fractions...



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

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

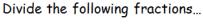
$$4 \qquad \frac{1}{3} \div \frac{8}{p}$$

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

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

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

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





Silver Questions



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

$$\frac{8}{t} \div \frac{2}{3} \qquad \qquad \stackrel{\mathbf{4}}{=} \qquad \frac{5}{8} \div \frac{10}{p}$$

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

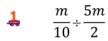
$$\frac{a}{14} \div \frac{b}{8}$$
  $\stackrel{\triangle}{=}$   $\frac{m}{22} \div \frac{n}{10}$ 

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

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

#### Gold Questions

Divide the following fractions...



$$\frac{h}{3} \div \frac{7}{1}$$

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

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

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

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

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

$$\frac{2}{5z^3} \div \frac{17}{z^2}$$

#### Bronze Answers

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

### Silver Answers

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

#### Gold Answers

- 1. 1/25
- 2. 5/7
- 3. y/12
- 4. 71
- 5. 9/f
- 6. 20/3e<sup>2</sup>
- 7.  $5w^2/9$
- 8. 1/30z