

## UNIT 4 *Fractions and Percentages*

## Overhead Slides

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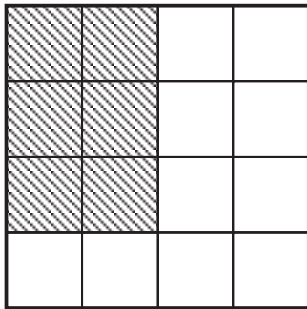
### **Overhead Slides**

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- 4.4 Addition and Subtraction of Fractions
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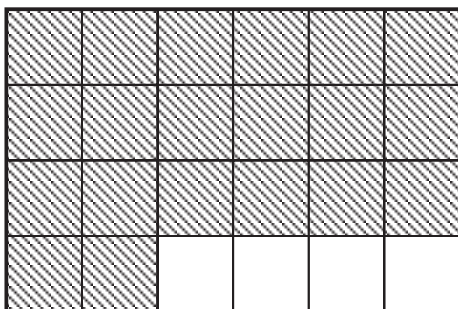
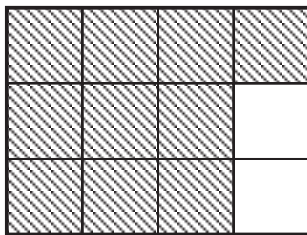
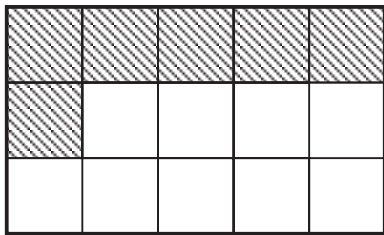
# OS 4.1

## *Equivalent Fractions 1*

Write down, in two equivalent ways, the fraction of each shape that has been shaded:



$$\frac{\quad}{16} = \frac{\quad}{8}$$



## OS 4.2

*Equivalent Fractions 2*

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Complete the following statements:

$$1. \quad \frac{3}{4} = \frac{\boxed{\phantom{000}}}{20} = \frac{\boxed{\phantom{000}}}{40} = \frac{\boxed{\phantom{000}}}{100}$$

$$2. \quad \frac{5}{6} = \frac{\boxed{\phantom{000}}}{24} = \frac{\boxed{\phantom{000}}}{120} = \frac{\boxed{\phantom{000}}}{600}$$

$$3. \quad \frac{7}{8} = \frac{\boxed{\phantom{000}}}{16} = \frac{\boxed{\phantom{000}}}{80} = \frac{\boxed{\phantom{000}}}{400}$$

$$4. \quad \frac{2}{3} = \frac{\boxed{\phantom{000}}}{21} = \frac{\boxed{\phantom{000}}}{300} = \frac{\boxed{\phantom{000}}}{3000}$$

$$5. \quad \frac{11}{20} = \frac{\boxed{\phantom{000}}}{100} = \frac{\boxed{\phantom{000}}}{140} = \frac{\boxed{\phantom{000}}}{160}$$

$$6. \quad \frac{4}{5} = \frac{12}{\boxed{\phantom{000}}} = \frac{28}{\boxed{\phantom{000}}} = \frac{44}{\boxed{\phantom{000}}}$$

## OS 4.3

*Fractions of Quantities*

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Complete the following calculations:

1.  $\frac{1}{5}$  of 20 =

$\frac{3}{5}$  of 20 =

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2.  $\frac{1}{8}$  of £32 =

$\frac{5}{8}$  of £32 =

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3.  $\frac{1}{5}$  of 85 kg =

$\frac{4}{5}$  of 85 kg =

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4.  $\frac{1}{7}$  of 42 m =

$\frac{5}{7}$  of 42 m =

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## OS 4.4

*Addition and Subtraction of Fractions*

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Complete the following calculations:

$$1. \quad \frac{1}{2} + \frac{3}{5} = \frac{\boxed{\phantom{00}}}{10} + \frac{\boxed{\phantom{00}}}{10}$$
$$= \frac{\boxed{\phantom{00}}}{10}$$

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$$2. \quad \frac{3}{5} + \frac{2}{3} = \frac{\boxed{\phantom{00}}}{15} + \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$
$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

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$$3. \quad \frac{4}{7} + \frac{3}{4} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} + \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$
$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

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$$4. \quad \frac{5}{8} - \frac{2}{5} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} - \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$
$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

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## OS 4.5

*Multiplication of Fractions*

Complete each of the following calculations:

$$1. \quad \frac{3}{5} \times \frac{1}{2} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$


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$$2. \quad \frac{4}{5} \times \frac{3}{7} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$


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$$3. \quad \frac{3}{8} \times \frac{2}{9} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$


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$$4. \quad 1\frac{1}{2} \times 1\frac{1}{3} = \frac{\boxed{\phantom{00}}}{2} \times \frac{\boxed{\phantom{00}}}{3}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$


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## OS 4.6

*Division of Fractions*

Complete each of the following calculations:

$$\begin{aligned}
 1. \quad \frac{1}{2} \div \frac{3}{4} &= \frac{1}{2} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \\
 &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \\
 &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}
 \end{aligned}$$


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$$\begin{aligned}
 2. \quad \frac{4}{5} \div \frac{3}{7} &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \\
 &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \\
 &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}
 \end{aligned}$$


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$$\begin{aligned}
 3. \quad 2\frac{1}{2} \div 1\frac{1}{2} &= \frac{\boxed{\phantom{00}}}{2} \div \frac{\boxed{\phantom{00}}}{2} \\
 &= \frac{\boxed{\phantom{00}}}{2} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \\
 &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \\
 &= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}
 \end{aligned}$$


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## OS 4.7

*Fractions, Decimals and Percentages*

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Complete this table:

<i>Fraction</i>	<i>Decimal</i>	<i>Percentage</i>
	0.5	
		5%
$\frac{1}{4}$		
	0.18	
		20%
	0.34	
$\frac{6}{25}$		
	0.04	
$\frac{1}{8}$		

**OS 4.8***Percentage Increases and Decreases*

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1. *Increase 80 by 15%.*

$$15\% \text{ of } 80 = \boxed{\phantom{00}} \times 80$$

$$= \boxed{\phantom{00}}$$

$$80 + \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

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2. *Increase 200 by 30%.*

$$30\% \text{ of } 200 = \boxed{\phantom{00}} \times 200$$

$$= \boxed{\phantom{00}}$$

$$200 + \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

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3. *Decrease 350 by 8%.*

$$8\% \text{ of } 350 = \boxed{\phantom{00}} \times 350$$

$$= \boxed{\phantom{00}}$$

$$350 - \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

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