1. Students could get them right for the wrong reasons (mental shortcuts)

2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don’t start with:

2^2

Start with:

3^2

1. Students could get them right for the wrong reasons (mental shortcuts)

2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don't start with:

$$(x+5)(x+1)$$

Start with:

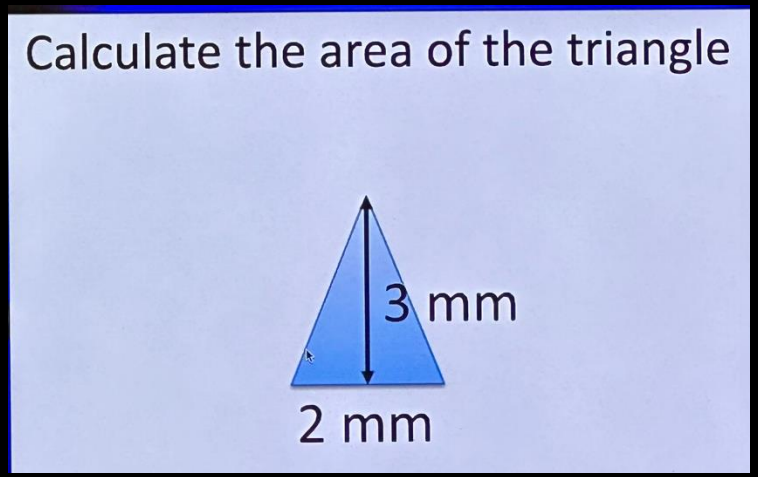
$$(2x+5)(10x+3)$$

1. Students could get them right for the wrong reasons (mental shortcuts)

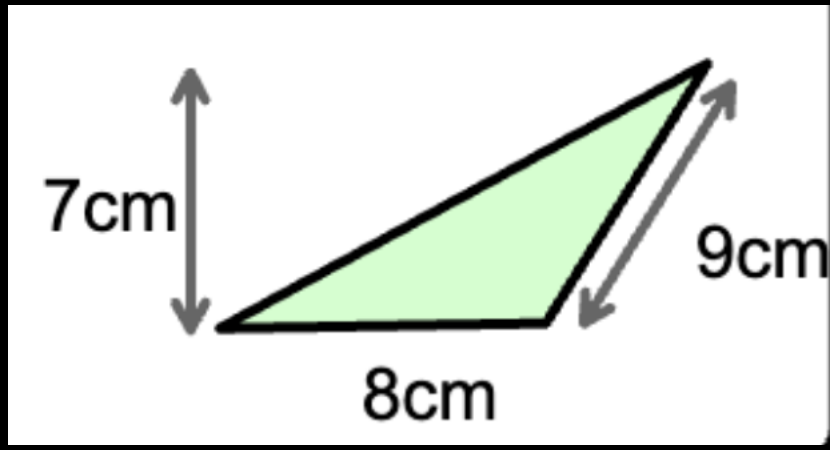
2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don't start with:



Start with:



1. Students could get them right for the wrong reasons (mental shortcuts)

2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don’t start with:

Find 10% of 800kg

Start with:

Find 25% of 800kg

Find 17% of 800kg

1. Students could get them right for the wrong reasons (mental shortcuts)

2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don't start with:

Surface area of a cube

Start with:

Surface area of a cuboid

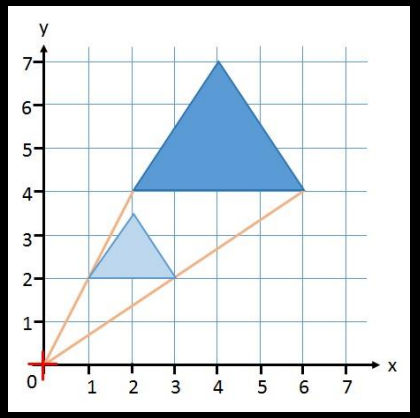
Surface area of a pyramid

1. Students could get them right for the wrong reasons (mental shortcuts)

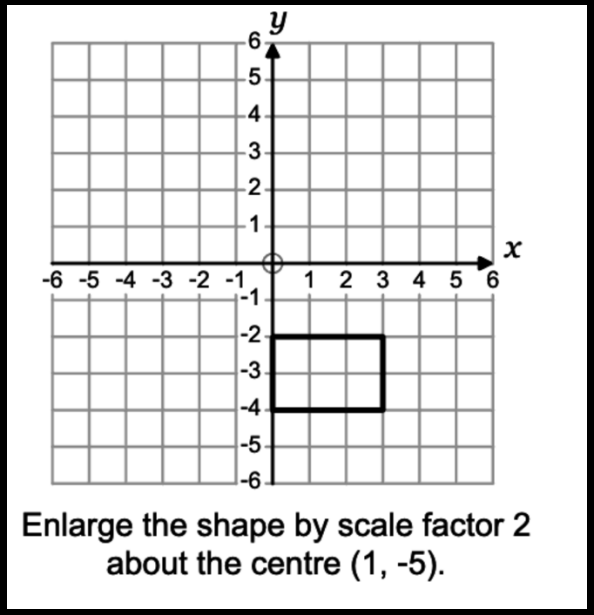
2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don't start with:



Start with:



1. Students could get them right for the wrong reasons (mental shortcuts)

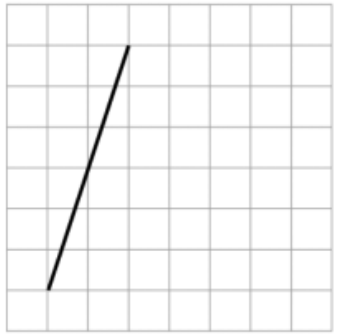
2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don't start with:

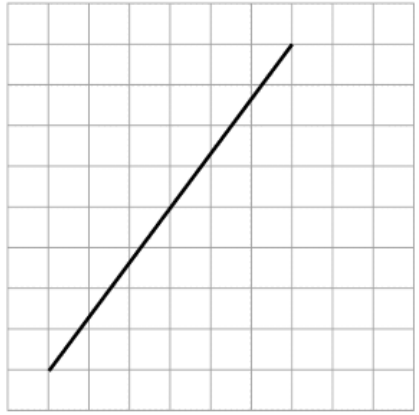
Which is easier to start with?

Find the gradient of this line, whose gradient is 3:



Start with:

Or the gradient of this line, whose gradient is $\frac{4}{3}$:



1. Students could get them right for the wrong reasons (mental shortcuts)

2. Useful secrets are hidden

3. You have to teach a different method for more challenging examples

Don't start with:

$$y = x^2$$

$$\frac{dy}{dx} =$$

Start with:

$$y = 5x^3$$

$$\frac{dy}{dx} =$$