Rearranging formulae: powers and roots

Exit ticket ANSWERS Name _____

1. Make x the subject of $y = x^2 - 8$

$x = \pm\sqrt{y + 8}$

2. Make x the subject of $p = \sqrt{x} + 6$

$x = (p - 6)^2$

3. Make x the subject of $t = (x - 3)^2$

$x = 3 \pm \sqrt{t}$

4. Make x the subject of $k = \frac{5}{x^2}$

$x = \pm\sqrt{\frac{5}{k}}$

The Maths Habit

Rearranging formulae: powers and roots

Exit ticket ANSWERS Name _____

1. Make x the subject of $y = x^2 - 8$

$x = \pm\sqrt{y + 8}$

2. Make x the subject of $p = \sqrt{x} + 6$

$x = (p - 6)^2$

3. Make x the subject of $t = (x - 3)^2$

$x = 3 \pm \sqrt{t}$

4. Make x the subject of $k = \frac{5}{x^2}$

$x = \pm\sqrt{\frac{5}{k}}$

The Maths Habit

Rearranging formulae: powers and roots

Exit ticket ANSWERS Name _____

1. Make x the subject of $y = x^2 - 8$

$x = \pm\sqrt{y + 8}$

2. Make x the subject of $p = \sqrt{x} + 6$

$x = (p - 6)^2$

3. Make x the subject of $t = (x - 3)^2$

$x = 3 \pm \sqrt{t}$

4. Make x the subject of $k = \frac{5}{x^2}$

$x = \pm\sqrt{\frac{5}{k}}$

The Maths Habit

Rearranging formulae: powers and roots

Exit ticket ANSWERS Name _____

1. Make x the subject of $y = x^2 - 8$

$x = \pm\sqrt{y + 8}$

2. Make x the subject of $p = \sqrt{x} + 6$

$x = (p - 6)^2$

3. Make x the subject of $t = (x - 3)^2$

$x = 3 \pm \sqrt{t}$

4. Make x the subject of $k = \frac{5}{x^2}$

$x = \pm\sqrt{\frac{5}{k}}$

The Maths Habit

Rearranging formulae: powers and roots

Exit ticket ANSWERS Name _____

1. Make x the subject of $y = x^2 - 8$

$x = \pm\sqrt{y + 8}$

2. Make x the subject of $p = \sqrt{x} + 6$

$x = (p - 6)^2$

3. Make x the subject of $t = (x - 3)^2$

$x = 3 \pm \sqrt{t}$

4. Make x the subject of $k = \frac{5}{x^2}$

$x = \pm\sqrt{\frac{5}{k}}$

The Maths Habit

Exit ticket Rearranging formulae: powers and roots

NEXT LESSON

1 Make x the subject of $y = x^2 - 8$

$x = \pm\sqrt{y + 8}$

TESTS Undoing a square: the inverse in order, then $\pm\sqrt{}$

LOOK FOR
- $x = 8 \pm \sqrt{y}$ square rooted before undoing the − 8
- $x = \sqrt{y + 8}$ missed the ±: $-\sqrt{}$ fits too

FIX IT

Make x the subject of $y = x^2 + 3$

$x = \pm\sqrt{y - 3}$

---

2 Make x the subject of $p = \sqrt{x} + 6$

$x = (p - 6)^2$

TESTS Undoing a square root by squaring, after the other steps

LOOK FOR
- $x = p^2 - 6$ squared before undoing the + 6
- $x = p^2 - 36$ squared each term on its own

FIX IT

Make x the subject of $p = \sqrt{x} - 2$

$x = (p + 2)^2$

---

3 Make x the subject of $t = (x - 3)^2$

$x = 3 \pm \sqrt{t}$

TESTS A squared bracket: $\pm\sqrt{}$ first, then undo inside the bracket

LOOK FOR
- $x = \sqrt{t} - 3$ took 3 away and missed the ±

FIX IT

Make x the subject of $t = (x + 4)^2$

$x = -4 \pm \sqrt{t}$

---

4 Make x the subject of $k = \frac{5}{x^2}$

$x = \pm\sqrt{\frac{5}{k}}$

TESTS The subject in a denominator: multiply it up first

LOOK FOR
- $x = \pm\sqrt{5k}$ multiplied by 5 instead of dividing

FIX IT

Make x the subject of $k = \frac{7}{x^2}$

$x = \pm\sqrt{\frac{7}{k}}$