Part 1

Skill Review 4

EQUAL1.tex

Exercise 1 *Fill in the missing elements of the following equality.*
Hint: $(a^2 - b^2) = (a + b)(a - b)$
$x - 9 = (\boxed{\sqrt{x}} + 3)(\boxed{\sqrt{x}} - 3)$

EQUAL2.tex

Exercise 2 *Fill in the missing elements of the following equality.*
Hint: $(a^2 - b^2) = (a + b)(a - b)$
$x^2 - 7 = (x + \boxed{\sqrt{7}})(x - \boxed{\sqrt{7}})$

EQUAL3.tex

Exercise 3 *Fill in the missing elements of the following equality.*
Hint: $(a + b)^2 = a^2 + 2ab + b^2$
$\sin^2(x) + \sin(x) + \frac{1}{4} = (\sin(x) + \boxed{\frac{1}{2}})(\boxed{\sin(x) + \frac{1}{2}})$

EQUAL4.tex

Exercise 4 *Fill in the missing elements of the following equality.*
$e^{2x} - e^x + 6 = (\boxed{e^x - 3})(\boxed{e^x} + 2)$

EQUAL5.tex

Exercise 5 *Solve for x.*
$\sqrt[3]{x - 3} = 2$
$x = \boxed{11}$

EQUAL6.tex

Exercise 6 *Use the following equality to find a and b.*
$3x + 7 = ax + \frac{3b - 1}{2}$

$a = \boxed{3}$
$b = \boxed{5}$

`EQUAL7.tex`

Exercise 7 *Solve for x.*
$x - 3x^{\frac{1}{2}} + 2 = 0$
Larger value $x_1 = \boxed{4}$
Smaller value $x_2 = \boxed{1}$

`EQUAL8.tex`

Exercise 8 *Fill in the missing elements of the following equality.*
$x^6 - 7x^3 - 8 = (x^3 - 8)(\boxed{x^3 + 1})$

`EQUAL9.tex`

Exercise 9 *Use the following property to fill in the missing parts.*
Difference of cubes: $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$
$x^3 - 8 = (\boxed{x} - \boxed{2})(\boxed{x^2} + \boxed{2x} + \boxed{4})$

`EQUAL10.tex`

Exercise 10 *Use the following property to fill in the missing parts.*
Sum of cubes: $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$
$x^3 + 1 = (\boxed{x} + \boxed{1})(\boxed{x^2} - \boxed{x} + \boxed{1})$
